This section provides a background discussion of the regional hydrology, flooding, water quality, water purveyors, and water sources in Martinez. This section is organized with an existing setting, regulatory setting, and impact analysis.

Key Terms

AF: Acre Feet: The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

AFY: Acre Feet per Year

BGS: Below Ground Surface.

CFS: Cubic Feet per Second.

GPD: Gallons per Day.

GPM: Gallons per Minute.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million Gallons

MGD: Million Gallons per Day

Surface Water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is naturally replenished through precipitation, but is naturally lost through evaporation and seepage into soil.

3.9.1 EXISTING SETTING

REGIONAL HYDROLOGY

The City of Martinez is located in the north-central part of Contra Costa County, California approximately 25 miles northeast of San Francisco and roughly 60 miles southwest of Sacramento. Martinez is situated just south of the Carquinez Strait which opens to the San Pablo Bay. Approximately seven miles to the east of Martinez is the confluence of the Sacramento and San Joaquin rivers that together furnish roughly 51% of the State's water supply.[1] Surface water from

[1] California Regional Water Quality Control Board. Available at:

http://www.waterboards.ca.gov/rwqcb5/water_issues/basin_plans/sacsjr.pdf

the two drainage basins meet and form the Delta, which ultimately drains to San Francisco Bay. The Delta is a maze of river channels and diked islands covering roughly 1,150 square miles, including 78 square miles of water area. The legal boundary of the Delta is described in Section 12220 of the Water Code, and is located roughly seven miles west of Martinez.

Topography

Martinez consists of two general topographic areas: the lowland area and the upland area. The low land area extends from the Carquinez Strait south and extends along Alhambra Creek in the western portion of Martinez, and along Pacheco Boulevard in the eastern portion of Martinez. The upland areas consist of hills that border the lowland areas on the west, east, and south. These hills represent the surface expression of structural folding and uplift.

Climate

Martinez has a typical Mediterranean climate (warm dry summer and cool wet winter) of the coastal areas of Central California. Mean annual precipitation is approximately 18.00 inches, more than 95 percent of which falls during the cool season, from October to April. Average daily temperature ranges from 36 to 89 degrees Fahrenheit (°F), but the extreme low and high temperatures have been 19°F and 115°F, respectively. The rainy season begins in November and ends in March.

WATERSHEDS

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1: STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.

Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALWATER, CALIFORNIA INTERAGENCY WATERSHED MAPPING COMMITTEE 2008

HYDROLOGIC REGION

The San Francisco Bay (Hydrologic Region) HR covers approximately 2.88 million acres (4,500 square miles) and includes all of San Francisco and portions of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda counties. The region corresponds to the boundary of Regional Water Quality Control Board (RWQCB) 2. Significant geographic features include the Santa Clara, Napa, Sonoma, Petaluma, Suisun-Fairfield, and Livermore valleys; the Marin and San Francisco peninsulas; San Francisco, Suisun, and San Pablo bays; and the Santa Cruz Mountains, Diablo Range, Bolinas Ridge, and Vaca Mountains of the Coast Range. While being the smallest in size of the 10 HRs in the State, the region has the second largest population in the State. Major population centers include the cities of San Francisco, San Jose and Oakland. [2]

HYDROLOGIC UNIT

The Planning Area is within the western part of the Suisun Bay hydrologic unit (HUC 8) (Hydrologic Unit Code 18050001). The Suisun Bay watershed, which is characterized by generally treeless rolling hills with higher elevations ranging between 100 and 272 feet above mean sea level (amsl) and near the Sacramento and San Joaquin river delta to the east. Figure 3.9-1 illustrates the boundaries of the hydrologic units relative to the Planning Area.

HYDROLOGIC AREA

For purposes of planning on a city-wide basis, hydrologic areas are generally considered to be the appropriate watershed planning level. As a planning area becomes smaller the hydrologic area level may be too large in terms of scale, and a hydrologic subarea may be considered more appropriate. The Planning Area is located within three hydrologic areas (HUC 10). These include: Walnut Creek-Frontal Suisun Bay Estuaries, Mount Diablo Creek-Frontal Suisun Bay Estuaries, and the Suisun Bay Watershed. Figure 3.9-2 illustrates the boundaries of the hydrologic area relative to the Planning Area.

HYDROLOGIC SUB-AREA

There are numerous hydrologic sub-areas within and throughout Martinez and the city's Planning Area. Analysis of hydrologic sub-areas is appropriate for the review of individual projects, but is not appropriate for the watershed analysis of the City's General Plan. Figure 3.9-3 illustrates the boundaries of the hydrologic area (HUC 12), relative to the Planning Area.

[2] Department of Water Resources Bulletin 118

FLOODPLAIN MAPPING

Dam Inundation

Earthquakes centered close to a dam are typically the most likely cause of dam failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. The Planning Area has one dam that is identified by the Division of Safety of Dams and Bureau of Reclamation; the Martinez Dam is briefly described below:

The Martinez Dam is a Central Valley Project (CVP) in Contra Costa County, which contains the Martinez Reservoir. The dam was constructed by earth fill in 1946/1947, and is owned by the U.S. Bureau of Reclamation. The dam has a drainage area of 40.0 square miles, and an elevation of 72 feet. The total storage capacity is 268 AF. The reservoir's surface area is 13 acres, and has a Spillway Capacity of 53 (cubic feet per second) CFS. [3]

Martinez Reservoir is impounded in a small, north facing valley at the eastern edge of the City of Martinez. The site is situated on the northeast margin of the East Bay hills which are, in the immediate reservoir vicinity, rounded low hills rising to elevations of 200 feet or less. To the west and south, the topographic relief increases to 600 feet or more along prominent ridges and hills underlain by folded Tertiary and Cretaceous strata which strike generally NW-SE. Approximately two miles north of the reservoir, the Sacramento River flows westward from Suisun Bay through the Carquinez Strait. At the reservoir site, the hills are underlain by moderately hard Tertiary sandstone and minor shale, commonly mantled by thin alluvial cover. The bedrock strata dips moderately to the southwest of the reservoir. Minor, discontinuous faults locally cut the bedrock, but do not significantly disrupt the overall northwest tending synclinal structure. Throughout the site vicinity, alluvium, stream channel deposits, and artificial fill apron the hills and underlie the lower ground.[4]

The Martinez Dam does not have a history of dam failure; however, it is identified as having the potential to inundate habitable portions of the Planning Area in the unlikely event of dam failure. Figure 3.9-4 shows the extent of inundation by surface water if the dam were to fail.

FEMA Flood Zones

FEMA mapping provides important guidance for the City in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs). The FEMA FIRM for the Planning Area is shown on Figure 3.9-5.

[3] http://www.usbr.gov/projects/Facility.jsp?fac_Name=Martinez+Dam&groupName=Hydraulics+%26+Hydrology

[4] U.S Department of the Interior Bureau of Reclamation

Areas that are subject to flooding are indicated by a series of alphabetical symbols, indicating anticipated exposure to flood events:

- **Zone A:** Subject to 100-year flooding with no base flood elevation determined. Identified as an area that has a one percent chance of being flooded in any given year.
- **Zone AE:** Subject to 100-year flooding with base flood elevations determined.
- **Zone AH:** Subject to 100-year flooding with flood depths between one and three feet being areas of ponding with base flood elevations determined.
- **500-year Flood Zone:** Subject to 500-year flooding. Identified as an area that has a 0.2 percent chance of being flooded in a given year.

Creeks and Flood Control

There are three drainage basins within the Planning Area. These include: Grayson Creek, Vine Hill, and Alhambra Creek drainage basin.

Grayson Creek is a perennial stream with some intermittently flowing tributaries, which drains much of the valley area of Pleasant Hill, as well as an area at the southernmost Martinez city limits.

Vine Hill Drainage Basin is an intermittent stream that drains roughly five to seven square miles of generally low rolling landscape between Martinez Ridge and Interstate 680.

Alhambra Creek is the most critical hydrologic system in the Martinez area. An intermittent stream draining 16 square miles and passing through urban areas of Martinez, it possesses greatest flood risk. Alhambra Creek is considered a flash drainage basin characterized by a rapid rise in flood peaks and rapid recessions. In addition, the section of the channel north of Main Street is influenced by tidal action. Alhambra Creek has received increasing amounts of surface flow runoff over the years with the rise in impervious surfaces in its urban reaches. Impervious surfaces such as concrete and asphalt prevent absorption of runoff and, in addition to swelling the flow within the creek channel itself, excessive runoff can lead to overland sheet flow within the basin. The flooding of Downtown Martinez has been a frequent winter occurrence.

The Planning Area has had a history of flooding since its founding in 1849, with the most recent major flood events occurring in the winter of 1997-98. Downtown Martinez is built in the floodplain of Alhambra Creek, and falls within the 100-year flood plain established by FEMA (Federal Emergency Management Agency). Projects completed in 2001-2002 worked to reduce the frequency of flooding in the Downtown area. These projects widened and realigned a section of the Alhambra Creek, restored floodplains, and provided overflow and wetland areas to accommodate higher peak flows. Before this work took place, flooding frequency was estimated to be every 2 to 7 years. With these improvements, flooding will still occur about every 10 to 20

years.[5] According to the 2002 report issued by the California Floodplain Management Task Force, the chance of a 100-year flood during a 30-year mortgage is calculated at 26%.[6]

STORMWATER QUALITY

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

303(d) Impaired Water Bodies: Section 303(d) of the Federal Clean Water Act requires states to identify waters that do not meet water quality standards or objectives and, thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the states to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The Planning Area has two water bodies listed on the 2010 Section 303(d) list of impaired water bodies. Grayson Creek, and the Carquinez Strait are listed as Category 5 segments, which means they are a water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.

- Grayson Creek: The pollutant listed for this segment is trash originating from illegal dumping and urban runoff/storm sewers. The estimated size of the area affected is seven miles. The TMDL is estimated to be completed by 2021.

[5] Alhambra Watershed Council (AWC). Available at: http://www.ccrcd.org/pdf/Alham_flood_facts.pdf

[6] California Floodplain Management Report, Nov. 27, 2002

- The Carquinez Strait: The pollutants listed for this segment include: Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Dioxin compounds, Furan Compounds, Invasive Species, Mercury, Polychlorinated biphenyls (PCBs), and Selenium. The estimated size of the area affected is 5,657.31 Acres. The TMDL is estimated to be completed between 2019 for all pollutant compounds.

The Contra Costa Clean Water Program (CCCWP) was established in 1991 in response to the federal stormwater regulations. The CCCWP comprises Contra Costa County, its 19 Cities/Towns (including Martinez), and the Contra Costa County Flood Control and Water Conservation District. Contra Costa is within the jurisdiction of two Water Boards – San Francisco Bay Water Board (which includes Martinez), and the Central Valley Water Board.

The eastern portions of the unincorporated Contra Costa County, and the cities of Antioch, Brentwood, and Oakley, are covered under a Permit issued by the Central Valley Water Board. The remaining Contra Costa municipalities are covered under a Permit issued by the San Francisco Bay Water Board. Each local jurisdiction must implement specified activities year-round. They must incorporate stormwater pollution prevention into municipal operations; inspect local businesses and construction sites; enforce prohibitions against non-stormwater discharges entering creeks or storm drains; perform specified public outreach activities; require new developments to manage runoff pollutants; reduce the quantity of trash, copper, mercury, and PCBs entering creeks and storm drains, and monitor water quality as well as other activities.[7]

This Permit requires implementation of Best Management Practices (BMPs) to reduce the level of pollutants in the stormwater to the maximum extent practicable. Some of the more important requirements are summarized below. Each of the members of the CCCWP are called Permittees in the discussion below:

- The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater into storm drain systems and watercourses. It shall be prohibited to discharge rubbish, refuse, bark, sawdust, or other solid wastes into surface waters.

- Permittees shall use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating the stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used

[7] Contra Costa Clean Water Program (CCCWP) Available at: http://www.cccleanwater.org/permits/

to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

- Each Permittee shall implement an industrial and commercial site control program at all sites which could reasonably be considered to cause or contribute to pollution of stormwater runoff, with inspections and effective follow-up and enforcement to abate actual or potential pollution sources.
- Permittees shall develop and implement an illicit discharge program that includes an active surveillance component and a centralized complaint collection and follow-up component to prevent illicit discharge into stormwater. Permittees shall maintain a complaint tracking and follow-up data system.
- Each Permittee shall implement a construction site inspection and control program at all construction sites.
- Through outreach programs, each Permittee shall increase the knowledge of residents regarding the impacts of stormwater pollution on receiving water and potential solutions to mitigate the problems change, the waste disposal and runoff pollution generation behavior of residents by encouraging implementation of appropriate solutions, and involve various citizens in mitigating the impacts of stormwater pollution.
- Prevent the impairment of urban streams by pesticide-related toxicity.
- Reduce trash loads from municipal stormwater systems by 40% by 2015, 70% by 2018, and 100% by 2023.
- Implement a Total Mercury and Methylmercury control program.

WATER RESOURCES

Water Supplies

Water service in Martinez is provided for residential, commercial, industrial, public and irrigation customers, and for fire protection uses from treated surface water (for potable water uses) and groundwater (for irrigation water uses). Over 99% of the City's water supply is from treated surface water, while only a small percentage comes from groundwater for landscape and irrigation purposes. Each source of supply is described below.

SURFACE WATER

Martinez's surface water supply is from the San Joaquin River Delta. The City of Martinez purchases untreated water from Contra Costa Water District (CCWD). The City water supply comes from the Contra Costa Canal which terminates in the Martinez Reservoir near the City's water treatment plant. The water is sold to Martinez based on CCWD's rate structure per unit of water delivered. The City has received all of its untreated water supply from CCWD since 1949, and has

no other water supply providers. The City owns and operates the Martinez Water Treatment Plant located at 3003 Pacheco Boulevard. The treatment plant has a filtration capacity of 14.7 mgd.

GROUNDWATER

The City has two active municipal wells within its service area. The City currently produces groundwater from these wells to irrigate Hidden Lakes Park, and Nancy Boyd Park. As of 2012, the City produced approximately 7,000 gallons per day (7.84 AFY) of groundwater from the well at the Hidden Lakes Park. With the addition of a second well at Nancy Boyd Park, the City's total groundwater production is estimated to be 13.4 AFY. This groundwater production is insignificant in comparison to the City's overall supply needs. The City has no major groundwater production facilities for water supply, and there are no major groundwater basins underlying the City. The nearest groundwater basin is the Ygnacio Valley groundwater basin (Basin 2-6) east of Interstate 680.[8]

RECYCLED WATER SUPPLIES

The City does not currently supply any recycled water and there are not currently any recycled water projects planned. However, wastewater generated from the water service area is recycled and used outside the water service area boundaries. Recycled water has the potential to offset some of the treated water demand in the future, although no plans in place.

Water Demands

Serving 8,595 water service accounts in 2010, the City provided customers with 3,837 AFY (3.43 mgd) of metered water. Metered water use included treated water deliveries to the distribution system measured at the customer location. There are no agricultural users or unmetered water service connections to customers within the City water service area. Some unmetered water use does occur at the treatment plant as treated water is diverted from the distribution system to meet treatment plant operational needs. Since these uses are generally non-consumptive, they do not increase the water supply needs for the City.

Table 3.9-2 contains the City's metered water deliveries to specific customer sector classes for the years of 2005 and 2010. It also contains the number of accounts for each sector class and the volume of unaccounted for water.

TABLE 3.9-2 WATER DELIVERIES 2005 AND 2010

CUSTOMER SECTOR	*2005*		*2010*	
	# OF ACCOUNTS (1)	*VOLUME (AFY)*	*# OF ACCOUNTS*	*VOLUME (AFY)*
Single Family	8,493	2,888	8,595	2,299
Multi-Family (2)	458	545	464	434
Commercial	372	507	371	324
Industrial	161	113	127	172
Institutional and Government	161	632	157	360
Landscape	159	352	167	248

[8] http://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?blobid=5719

Agricultural	0	0	0	0
Unaccounted Water (3)	NA	192	NA	384
Total (4)	**9,805**	**5,229**	**9,881**	**4221**

1 Number of accounts is equal to total number of active meters.
2 Multi-family units are classified as complexes in which one meter serves more than one unit. If a building contains more than one unit (i.e. attached) and each unit contains its own water meter, then each unit has been classified as a single family residence.
3 Unaccounted losses are equal to the difference between meter customer sector totals and CCWD deliveries.
4 Total demand equal to total deliveries from CCWD.

SOURCE: CITY OF MARTINEZ 2011. URBAN WATER MANAGEMENT PLAN 2010 UPDATE

As shown in Table 3.9-2, the City's water use is predominantly by residential customers. Of the 9,881 water service accounts, 8,595 are single-family residential accounts. Residential use as a whole accounts for 71 percent of total water deliveries. Landscape irrigation accounts for 6.5 percent, commercial/institutional account for 13 percent, and institutional and government account for 10 percent of total deliveries. Unaccounted water accounts for roughly nine percent of the total water supplied. Water in this category represents water losses through the water system (i.e. the difference between meter customer totals and CCWD deliveries).

The City's projected average annual use at buildout is roughly 4,888 AFY with requirements of the 20 x 2020 Water Conservation Plan. Without water reduction measures Martinez would be projected to use 6,110 AFY. Buildout demand is currently projected to occur by 2035.

Summary of Water Demands and Supplies

Table 3.9-3 summarizes annual projections of demands and supplies to meet the projected buildout through 2035, as documented in the City's 2010 Urban Water Management Plan.

TABLE 3.9-3: CURRENT AND PROJECTED MAXIMUM POTABLE DEMANDS AND SUPPLIES (AFY)

	2015	*2020*	*2025*	*2030*	*2035*
WATER DEMAND					
Maximum Demand w/o restrictions	5,593	5,711	5,785	5,948	6,110
Water Demand w/Max Restrictions	5,034	4,569	4,628	4,758	4,888
WATER SUPPLY					
Wholesale Purchase from Contra Costa Water District	5,026	4,556	4,615	4,745	4,875
City-Produced Groundwater	7.8	13.4	13.4	13.4	13.4

SOURCE: CITY OF MARTINEZ 2011. URBAN WATER MANAGEMENT PLAN 2010.

As shown in table 3.9-3, water demands taking into account requirements from the states 20 x 2020 conservation plan will not outpace water supplies. However, without water conservation restrictions the city would use more water than is projected to be supplied by the CCWD from 2015 through 2035.

Conservation Requirements

The City is required to reduce its future daily per capita usage to meet the requirements of the 20 x 2020 Water Conservation Plan. The City of Martinez is required to participate in a regional 20 x 2020 Water Conservation Plan through CCWD. With participation in the regional 20 x 2020 Plan,

the City will aim to meet reduction requirements of the 20 x 2020 Conservation Plan and reduce its 10-year baseline daily per capita usage by 20 percent by 2020, and by an interim target of 10 percent by 2015. For the City to meet the requirements of the 20 x 2020 Water Conservation Plan, it will be required to reduce its usage to 144 gallons per capita per day (GPCD) by 2015 and 128 GPCD by 2020. Because the City will participate in a regional effort through CCWD, the City may be allowed to have individual reductions less than this, if the CCWD's region as a whole can meet the requirements of the 20 x 2020 Water Conservation Plan. In the latest CCWD Capital Improvement Program 2016-2025, the CCWD has allocated a total of $25,300,000 towards water use efficiency investments for 20 x 2020, an increase of $17,800,000 from the prior (2015) Capital Improvement Program.

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed project.

FEDERAL REGULATIONS

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. The City of Martinez operates under NPDES permit Number (CAS612008) issued by the San Francisco Bay Regional Water Quality Control Board (SWRCB-2). Permittees must meet the requirements in Provision D of the General Permit, which require the development and implementation of a Storm Water Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development

6. Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations

Federal Emergency Management Agency (FEMA)

FEMA operates the National Flood Insurance Program (NFIP). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally but controlled federally. All rights of way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost. Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-flood proofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any

enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level. The Ordinance was further updated in July 2015 to reflect FEMA's required revisions, and provides additional clarifications to assist residents and City staff to administer the floodplain management measures.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and therefore must be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities in the Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Rivers and Harbors Appropriation Act of 1899

One of the country's first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States

STATE REGULATIONS

Assembly Bill 162

This bill requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of Water Resources (DWR). The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Assembly Bill 70

This bill provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

CA Government Code

The Senate and Assembly bills identified above have resulted in various changes and additions to the California Government Code. Key sections related to the above referenced bills are identified below.

Section 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

Section 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a "100-year flood." In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the Regional Water Quality Control Boards (RWQCBs) power to protect water

quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Senate Bill (SB) 610 and Assembly Bill (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the

analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Water Quality Control Plan for the Sacramento and San Joaquin River Basins

The Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

Water Efficient Landscape Ordinance (AB) 1881

The passage of Assembly Bill (AB) 1881 in 2006, directed the California Department of Water Resources (DWR) to develop a new State Landscape Water Conservation Ordinance (State Ordinance), which became effective on January 1, 2010. The State Ordinance requires that all new and rehabilitated landscapes be designed and installed to meet the latest best practices for water use efficiency.

LOCAL REGULATIONS

City of Martinez General Plan

The adopted City of Martinez General Plan establishes goals and policies related to flooding, hydrology, water quality, and water supplies and in the Land Use, Open Space, and Safety Elements and in the Governmental Jurisdiction, Central Martinez Specific Plan, Alhambra Hills Specific Area Plan, and Hidden Lakes Specific Area Plan sections of the General Plan.

City of Martinez Urban Water Management Plan (2010)

The purpose of the 2010 Urban Water Management Plan is to ensure efficient use of urban water supplies in the city of Martinez and promote conservation. The UWMP discusses not only the availability of water, but also water use, reclamation, and water conservation activities. The UWMP complies with the Urban Water Management Planning Act (UWMP Act) (California Water Code [CWC] Section 10610 et seq.), the Water Conservation Act of 2009 (CWC Section 10608), and the 20x2020 Water Conservation Plan, which are being implemented by the California Department of Water Resources (DWR).

City of Martinez Water Systems Master Plan (2006)

The City's 2006 Water Systems Master Plan includes a summary of the City's system-wide water demands, the planning criteria used to determine water system demands, the City's water distribution system model, an analysis of the City's water system, and a summary of existing and future water system facilities. The 2006 Water System Master Plan identifies system deficiencies and recommended improvements. The City implementation the recommendations are ongoing as funding is available.

Regional Landscape Water Conservation Ordinance

The Contra Costa Water District and local planning agencies worked together to develop a Regional Landscape Water Conservation Ordinance (Regional Ordinance) to comply with the state mandate (AB 1881). The Regional Ordinance is designed to both meet the State's water conservation goals and to be uncomplicated for planning staff to review and administer. As a result the City of Martinez amended the adopted 1195 Ordinance to include chapter 22.35 to provide for water conservation in landscaping for all new developments.

Contra Costa Clean Water Program

To comply with the Federal Clean Water Act, Contra Costa County, its 19 incorporated Cities and the Contra Costa County Flood Control & Water Conservation District have joined together to form the Contra Costa Clean Water Program (CCCWP). The CCCWP strives to eliminate stormwater pollution through public education, inspection and enforcement activities, and industrial outreach. The Contra Costa Clean Water Program is dedicated to maintaining a healthy environment in Contra Costa's creeks, rivers, the Delta, and the Bay.

Contra Costa County Municipal NPDES Permit Waste Discharge Requirements Order R2-2009-0074 NPDES Permit No. CAS612008

In response to the Federal Clean Water Act, the Contra Costa Clean Water Program regulates waste dischargers under a National Pollutant Discharge Elimination System (NPDES) Permit administered by the appropriate Regional Water Quality Control Board (RWQCB-2). Specifically, the municipalities are regulated with regard to their jurisdiction and/or maintenance responsibility for municipal storm drain systems and watercourses that they own or operate. The NPDES Permit is concerned primarily with regulating trash, pollutants of concern, and excessive hydrologic runoff which can carry sediment and cause flooding.

Contra Costa Clean Water Program Stormwater C.3 Guidebook

The 6th Edition of the Contra Costa Clean Water Program Stormwater C.3 Guidebook (2012) helps to ensure that applicable projects comply with the C.3 requirements in the California Regional Water Quality Control Boards' Municipal Regional Permit. The Guidebook provides detailed information about how to prepare a Stormwater Control Plan. In addition, there are two Guidebook Addendums, "Contra Costa Clean Water Program Technical Criteria for Non-LID Facilities" and "Preparing a Stormwater Control Plan for a Small Land Development Project".

Bay Area Stormwater Management Agencies, Start at the Source: Design Guidance Manual for Stormwater Quality Protection

This document is intended for use in the planning and design phases of residential, commercial, institutional, and industrial development and redevelopment. It recognizes that one of the best opportunities to reduce the generation of urban runoff or "nonpoint source pollution" from development is through planning and design. This document provides Best Management Practices including principles and techniques for basic siting and design considerations, construction phase strategies, and post construction property management practices. [9]

City of Martinez Clean Water Program

The City of Martinez Clean Water Program serves to radically reduce or eliminate pollutants from entering the municipal storm drain system. This program is mandated under the 1987 Amendments to the Federal Water Pollution Control Act or the Clean Water Act. Through activities known as best management practices or BMP's, the City conducts municipal maintenance (e.g., street sweeping and catch basin cleaning), public education and outreach, new development and construction controls, illicit discharge control activities, monitoring and special studies, and watershed management activities.

[9] http://www.cccleanwater.org/publications/

City of Martinez Floodplain Ordinance (Municipal Code Chapter 15.30)

The City initially adopted a Floodplain Ordinance in 1995, under Chapter 15.30 "Floodplain Management" of the City's Municipal Code. The Ordinance was further updated in July 2015 to reflect FEMA's required revisions, and provides additional clarifications to assist residents and City staff to administer the floodplain management measures. It is based on California Model Floodplain Management Ordinance for Coastal Communities developed in 2006 by the State Department of Water Resources to meet the minimum requirements of the National Flood Insurance Program (NFIP). In addition, it will allow for adaptation of future Flood Insurance Studies and FIRM's for the community.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, run-off or flooding on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Result in inundation by seiche, tsunami or mudflow.

IMPACTS AND MITIGATION

Impact 3.9-1: General Plan implementation could result in a violation of water quality standards or waste discharge requirements (Less than Significant)

Construction-Related Water Quality Impacts: Grading, excavation, removal of vegetation cover, and loading activities associated with future construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

As required by the Clean Water Act, each subsequent development project or improvement project will require an approved Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices for grading, and preservation of topsoil. A SWPPP is not required if the project will disturb less than one acre. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction.

Future development project applicants must submit the SWPPP with a Notice of Intent to the Regional Water Quality Control Board (RWQCB) to obtain a General Permit. The RWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities. The RWQCB accepts General Permit applications (with the SWPPP and Notice of Intent) after specific projects have been approved by the lead agency. The lead agency for each specific project that is larger than one acre is required to obtain a General Permit for discharge of storm water during construction activities prior to commencing construction (per the Clean Water Act).

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at this planning level is not feasible. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction. The Regional Water Quality Control Board will require a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each future project that disturbs an area one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion.

New Development-Related Water Quality Impacts: New development under the proposed General Plan could introduce constituents into the storm water that are typically associated with urban runoff. These constituents include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper. These pollutants tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in higher pollutant concentrations in the initial wet weather runoff. This initial runoff is referred to as the "first flush" of storm events. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff.

The amount and type of runoff generated by the various future projects could be greater than under existing conditions, due to increases in impervious surfaces. There could be a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents would result in water quality impacts to onsite and offsite drainage flows to area waterways.

The City of Martinez has developed the General Plan to include policies that, when implemented, will reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The Open Space and Conservation Element contains Goal OS-G-8, which calls for the protection of water resource systems to maintain natural habitat within the Watershed and enhance the biological value of the City. And Goal OSC-G-9 that supports the protection of water quality from pollutants and protect the resource. Goals OS-G-8 and OSC-G-9 are supported by a variety of policies and implementation measures including: Policies OSC-P-8.1 that ensures the preservation of water resources such as the Alhambra Creek Watershed, wetlands, flood plains, recharge zones, riparian areas, open space and native or natural habitats. OSC-P-9.1 supports the protection and improvement of the water quality of in all of Martinez's watersheds, creeks, and water bodies, and additionally, OSC-P-9.1 enforces Federal State and local mandates regarding water quality such as the National Pollutant Discharge Elimination System (NPDES). Implementation measures contained in the Open Space and Conservation element further support water quality and pollution. These include: OSC-I-8.1a that requires proposed projects located near watersheds or riparian areas to protect the natural resource consistent with flood management and recharge objectives. OSC-I-9.1a Review all projects in watershed to limit damage and preserve quality of water insuring proper mitigation measures as part of development. OSC-I-9.1b ensures the management and storage of hazardous materials, especially underground tanks that may leak into existing waterways. OSC-I-9.1c considers the establishment of buffers between development and water resources to prevent contamination of the water from urban pollutants. OSC-I-9.1a supports the Contra Costa Clean Water Program and continues to implement a stormwater clean water program to reduce pollutants according to NPDES mandates. OSC-I-9.1b requires new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff, pollutant discharges and prevent increase in runoff rates in development projects. OSC-I-9.1c aims to reduce impervious surface areas associated with projects and encourages design that reduces stormwater flow and volume. OSC-I-9.1d ensures the enforcement of development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways. OSC-I-9.1f supports the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants.

Additionally the Land Use Element of the proposed General Plan includes several implementation measures that further support water quality and reductions to water quality impacts including: LU-3.1a that considers zoning ordinance amendments to require that all new development along a creek or adjacent to a natural watercourse prepare a creek/watercourse preservation and protection plan. LU-3.1b that considers the formulation of regulations to include required setbacks from the streams, creeks and watercourses to protect the resource, habitat and any recreation

value associated therewith. And, LU-3.1c that requires development plans to include urban water runoff plans that protect adjacent waterways.

The policies identified above include numerous requirements that would, collectively, reduce the potential for General Plan implementation to result in increased water quality impacts. In addition, compliance with the Clean Water Act, regulations enforced by the Regional Water Quality Control Board would ensure that construction-related impacts to water quality are minimized, and future projects comply with all applicable laws and regulations. The implementation of the General Plan policies in the Open Space and Conservation, and Land Use Elements, combined with compliance with federal and state regulations, would ensure that implementation of the General Plan would have a **less than significant** impact on water quality standards or waste discharge requirements.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OS-G-8 *Protection of water resource systems to maintain natural habitat within the Watershed and enhance the biological value of the City*

OSC-G-9 *Protect high quality water from pollutants and protect the resource.*

Policies

OSC-P-8.1 *Water resources such as the Alhambra Creek Watershed, wetlands, flood plains, recharge zones, riparian areas, open space and native or natural habitat should be preserved.*

OSC-P-9.1 *Protect and improve the quality of water in all of Martinez's watersheds, creeks, and water bodies.*

OSC-P-9.1 *Enforce Federal State and local mandate regarding water quality such as the National Pollutant Discharge Elimination System (NPDES).*

Implementation

OSC-I-8.1a *Require proposed projects located near watersheds or riparian areas to protect the natural resource consistent with flood management and recharge objectives.*

OSC-I-8.1b *Consider completion and adoption of an Alhambra Creek Watershed Management Plan*

OSC-I-9.1a *Review all projects in watershed to limit damage and preserve quality of water insuring proper mitigation measures as part of development.*

OSC-I-9.1b *Manage storage of hazardous materials, especially underground tanks that may leak into existing waterways.*

OSC-I-9.1c *Consider the establishment of buffers between development and water resources to prevent contamination of the water from urban pollutants.*

OSC-I-9.1a *Support the Contra Costa Clean Water Program and continue to implement a stormwater clean water program to reduce pollutants according to NPDES mandates.*

OSC-I-9.1b *Require new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects.*

OSC-I-9.1c *Reduce impervious surface areas associated with projects and encourage the design that reduces stormwater flow and volume.*

OSC-I-9.1d *Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.*

OSC-I-9.1e *Encourage the use of pest resistant and drought tolerant landscape design and features, and promote the use of design that incorporates stormwater detention and retention in development projects.*

OSC-I-9.1f *Support the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants, supply green habitat and nesting areas and help lower urban heat island effect.*

OSC-I-9.1g *Continue to strengthen the City's Water Conservation in Landscape Ordinance, update when necessary.*

OSC-I-9.1h *When appropriate utilize the Bay friendly Landscape Guidelines in order to reduce water consumption.*

OSC-I-9.1i *Support the efforts of Contra Costa County Sanitation District with respect to their reclaimed water management project.*

OSC-I-9.1j *Promote reclamation and reuse of wastewater for irrigation and to recharge aquifers.*

Land Use Element

Implementation Measures

LU-3.1a *Consider zoning ordinance amendments to require that all new development along a creek or adjacent to a natural watercourse prepare a creek/watercourse preservation and protection plan.*

LU-3.1b *Consider the formulation of regulations to include required setbacks from the streams, creeks and watercourses to protect the resource, habitat and any recreation value associated therewith.*

LU-3.1c *Require development plans to include urban water runoff plans that protect adjacent waterways.*

Impact 3.9-2: General Plan implementation could result in the depletion of groundwater supplies or interfere substantially with groundwater recharge (Less than Significant)

Less than 1 percent of the City's water comes from groundwater supplies. The City has two municipal wells within its service area, which are active wells. The City produces groundwater to irrigate Hidden Lakes Park, and Nancy Boyd Park. As of 2012, the City produced approximately 7,000 gallons per day (7.84 AFY) of groundwater from the well at the Hidden Lakes Park. With the addition of a second well at Nancy Boyd Park, the City's total groundwater production is estimated to be 13.4 AFY. This groundwater production is insignificant in comparison to the City's overall

supply needs. The City has no major groundwater production facilities for water supply, and there are no major groundwater basins underlying the City. The nearest significant groundwater basin is the Ygnacio Valley groundwater basin (Basin 2-6) on the east side of Interstate 680 and Taylor Road.

Groundwater use is expected to fluctuate seasonally, with maximum water use typically occurring during the months of June, July, August, and September, due to increased landscape irrigation. Subsequent development projects under the General Plan, such as residential, commercial, industrial, and roadway projects would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potentials, and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type. Projects located in urban areas would have less of an impact than projects converting open lands and spaces. The City must evaluate individual projects as they are proposed to ensure that they would not result in a significant interference with recharge.

The City of Martinez has developed the General Plan to include goals, policies, and implementation measures that, will reduce the risk of groundwater supply depletion, while encouraging groundwater recharge. Goal OSC-G-9 to preserve and Enhance the Quality of Surface and Groundwater Resources is supported my various policies and implementation measures including: OSC-P-8.2r that regulates overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin, and prohibits (unless absolutely necessary), the construction of impermeable surfaces over permeable soil and geologic areas or the removal of permeable soils by extensive grading and scraping practices. OSC-I-9.1g supports efficient water use, and encourages conservation by continuing to update the water conservation ordinances in Martinez. OSC-P.9.5 supports alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages, which increases recharge potential. OSC-P-10.1 supports the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions. Goal OSC-G-6 to reduce energy, water, and resource consumption, is supported by policies and implementation measures including: OSC-P-6.1that supports reductions in water use, and resource consumption as they pertain to buildings and construction. OSC-P-6.2 encourage compliance with sustainable building standards. OSC-P-6.3 strongly encourage landscaping that promotes more efficient use of water and energy including an evaluation of xeriscaping (no/low water use landscaping plants), native plants in landscaping, drip irrigation and irrigation controls. OSC-P-6.4 encourages existing buildings and new construction to incorporate energy- and water-efficient technologies.

Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. The implementation of the policies contained in the Open Space and Conservation Element listed above, are intended to ensure that development in the Martinez Planning Area protects local groundwater resources through a continued effort to reduce water

use, while also reducing impermeable surfaces throughout the Planning Area. Additionally the City does not anticipate increased groundwater consumption, and is committed to serving existing and future development through its surface water resources. Implementation of the following General Plan policies, combined with the City continuing to obtain surface water, and not increasing the consumption of groundwater, would ensure that the General Plan would have a **less than significant** impact relative to groundwater depletion and recharge.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OSC-G-6 *Reduce energy, water, and resource consumption.*

OSC-G-9 *Preserve and Enhance the Quality of Surface and Groundwater Resources.*

Policies

OSC-P-6.1 *Reduce Energy, Water, and Resource Consumption wherever possible as they pertain to buildings and construction.*

OSC-P-6.2 *Promote and encourage compliance with sustainable building standards.*

OSC-P-6.3 *Strongly encourage landscaping that promotes more efficient use of water and energy including an evaluation of xeriscaping (no/low water use landscaping plants), native plants in landscaping, drip irrigation and irrigation controls.*

OSC-P-6.4 *Encourage existing buildings and new construction to incorporate renewable energy and energy- and water-efficient technologies.*

OSC-P-8.2 *Regulate overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin. Unless absolutely necessary, prohibit the construction of impermeable surfaces over permeable soil and geologic areas or the removal of permeable soils by extensive grading and scraping practices.*

OSC-P.9.5 *Support alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages.*

Implementation Measures

OSC-I-9.1c *Reduce impervious surface areas associated with projects and encourage the design that reduces stormwater flow and volume.*

Impact 3.9-3: General Plan implementation could alter the existing drainage pattern of the site or area including alteration of the course of a stream or river, in a manner which would result in substantial erosion, or siltation runoff or flooding on-or off-site (Less than Significant)

Individual future projects developed after adoption of the General Plan could create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of runoff contaminants including sediment. Contributions of sediment to stormwater could degrade the quality of receiving waters. Suspended sediment load in surface runoff could flow into the stormwater drainage systems that discharge into rivers, and channels and ultimately could degrade the water quality of any of these water bodies. Additionally, future projects developed after adoption of the General Plan could potentially alter surface drainage patterns as a result of directly altering flow patterns, or placing structures in a floodway, all of which could yield increased amounts of stormwater runoff and result in potential on-site or off-site flooding. The construction activities associated with future projects, such as commercial, residential and industrial developments, as well as road widenings, and other infrastructure projects that convert permeable surfaces or install permanent structures would require stormwater drainage management measures to avoid flooding impacts.

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at the program level is not feasible. As previously discussed, a future project applicant would be required to obtain permits from the Army Corps of Engineers and the Department of Fish and Game if any work is performed within a jurisdictional water feature. Each future development project must also include detailed project specific floodplain and drainage studies that assess the drainage characteristics and flood risks so that an appropriate storm drainage plan can be prepared to control storm water runoff, both during and after construction. The drainage plan will ultimately include project specific best management measures that are designed to allow for natural recharge and infiltration of stormwater. Construction of storm drainage improvements would occur as part of an overall development project and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

The City of Martinez has developed the General Plan to include goals, policies, and implementation measures that, when implemented, will reduce erosion and siltation from along local waterways. Goal OSC-G-9 aims to preserve and enhance the Quality of Surface and Groundwater Resources, and Goal OSC-G-10 improves cooperative planning between all agencies within each Watershed-wide area. Goals OSC-G-9 and OSC-G-10 are supported by a variety of policies and implementation measures including: OSC-P-2.2 that discourages large scale alterations of the topography to prevent severe erosion and hydrologic hazard through planning and engineering review of soils and hydrology reports. OSC-I-9.1d enforces development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways. OSC-I-6.1d continues the incorporation of measures that reduce runoff and control stormwater.

OSC-I-9.1b requires new development to incorporate treatment measures, site design techniques, and source controls to address stormwater runoff pollutant discharges, and prevent increase in runoff rates in development projects. OSC-I-9.1f supports the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants. OSC-P-8.4 requires that all hilly areas, abide by grading practices for drainage purposes that restore natural patterns of surface water run-off with respect to volume of flow. OSC-P-9.1 ensures grading, filling and construction activity near watercourses be conducted in a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution. OSC-9.1.a continues to apply current National Pollutant Discharge Elimination System C.3 regulations, including the use of permeable surfaces. OSC-9.1.b continues the collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management. OSC-P-9.2 supports efforts to phase out the use of long-lived synthetic compounds, such as pesticides and vehicle anti-freeze, and certain naturally occurring substances which do not biodegrade, and encourages efforts to change manufacturing processes to use biodegradable materials, recycle manufactured products, reuse by-products, and use "green" products. OSC-P-9.3 encourages retailers to stock nontoxic alternatives to hazardous products. OSC-P-9.4 promotes proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems. OSC-P.9.5 supports alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages. OSC-9.5.a requires project approval (where feasible) to use vegetated areas to absorb and filter the fertilizers, pesticides and other run off pollutants. OSC-P-10.1 supports the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions. OCS-I-10a supports collaborative work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality. OCS-I-11.1b continues to implement the Alhambra Creek Enhancement Program as both public CIP projects and through condition of approval places on development adjacent to Alhambra Creek.

The Safety Element establishes policies and implementation measures to protect people and development from flood hazards, including flood hazards associated with the alteration of a site in a manner that could result in increased runoff and on-site and off-site flooding. Policy PS-P-6.2 requires new developments to be designed to minimize flooding hazards and to limit the amount of runoff that contributes to flooding. Policy PS-P-6.6 requires construction of storm drainage facilities and Low Impact Development techniques for new development. Measures PS-I-6.d and PS-I-6.2b require new development to limit impervious coverage to reduce excessive runoff and promote use of permeable paving and surfaces where appropriate. Measure PS-I-6.1f requires individual development projects to reduce or alleviate flood hazard conditions and to demonstrate that no adverse flooding impacts are created on upstream or downstream properties in the project vicinity.

Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. The implementation of the policies contained in the Open Space and Conservation Element, listed above are intended to ensure that development in the Martinez Planning Area protects drainage patterns to reduce effects of erosion and siltation throughout the

Planning Area. The City of Martinez has developed the General Plan to enhance natural storm drainage and water quality features, which will reduce water quality impacts. Implementation of General Plan policies and implementation measures would ensure that the General Plan would have a **less than significant** impact on drainage patterns from increased erosion, siltation, and on-site and off-site flooding.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OSC-G-8 *Reduce Flood Hazards while Enhancing the Creekside Environment*

OSC-G-9 *Preserve and Enhance the Quality of Surface and Groundwater Resources.*

OSC-G-10 *Improve cooperative planning between all agencies within each Watershed-wide area.*

Policies

OSC-P-2.2 *Discourage the large scale alteration of the topography to accommodate incompatible development patterns to prevent severe erosion and hydrologic hazard through planning and engineering review of soils and hydrology reports.*

OSC-P-8.1 *Support measures that would decrease the likelihood of flooding and/or reduce the amount of damage caused by flooding.*

OSC-P-8.4 *In all hilly areas, grading practices for drainage purposes should restore natural patterns of surface water run-off with respect to volume of flow.*

OSC-P-9.1 *Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.*

OSC-P-9.2 *Support efforts to phase out the use of long-lived synthetic compounds, such as pesticides and vehicle anti-freeze, and certain naturally occurring substances which do not biodegrade. Encourage efforts to change manufacturing processes to use biodegradable materials, recycle manufactured products, reuse by-products, and use "green" products.*

OSC-P-9.3 *Encourage retailers to stock nontoxic alternatives to hazardous products.*

OSC-P-9.4 *Continue to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems.*

OSC-P.9.5 *Support alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages.*

OSC-P-10.1 *Support the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions.*

Implementation Measures

OSC-I-9.1d *Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.*

OSC-I-6.1 d *Continue to incorporate measures to reduce runoff and control stormwater.*

OSC-I-9.1b *Require new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects.*

OSC-I-9.1f *Support the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants, supply green habitat and nesting areas and help lower urban heat island effect.*

OSC-9.1.a *Continue to apply current National Pollutant Discharge Elimination System C.3 regulations, including the use of permeable surfaces.*

OSC-9.1.b *Continue to work in collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management.*

OSC-9.5.a *Where feasible, a requirement of project approval should be the use vegetated areas to absorb and filter the fertilizers, pesticides and other run off pollutants*

OCS-I-10a *Continue to work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality.*

OCS-I-11.1b *Continue to implement the Alhambra Creek Enhancement Program as both public CIP projects and through condition of approval places on development adjacent to Alhambra Creek.*

Safety Element

Policies

PS-P-6.2 *Design new developments to minimize hazards associated with flooding and limit the amount of runoff that contributes to flooding.*

PS-P–6.6 *Require construction of storm drainage facilities and Low Impact Development (LID) techniques for new development.*

Implementation Measures

PS-I-6.1d *Limit the amount of impervious coverage by new development or existing developments during improvements to reduce potential hazards of excessive runoff . Strongly encourage pervious pavement for driveways and other hardscape.*

PS-I-6.1e *Continue to coordinate with FEMA and other agencies in the evaluation and mitigation of future flooding hazards that may occur as a result of sea level rise.*

PS -I–6.1f *Require individual development projects located in areas subject to flooding to reduce or alleviate flood hazard conditions through preparation of hydrological studies and incorporation of mitigation measures. Individual development project mitigation shall demonstrate, through qualified engineering analyses, that no adverse flooding impacts are created by development on upstream and downstream properties in the project vicinity. Compliance requirements shall be consistent with those prescribed in the Municipal Code.*

PS-I-6.2b *When feasible, promote the use of permeable paving or similar improvements in constructing patios, walkways, paths, driveways, and parking areas as a means of*

increasing natural percolation while reducing impacts to the City's storm drainage system.

PS-I- 6.2c *Require new development to construct and dedicate to the City as appropriate necessary infrastructure improvements to support proposed projects.*

PS-I- 6.2d *Require new development to maintain drainage infrastructure improvements serving such development.*

PS–I-6.6 a *As a condition of approval for new development and redevelopment of existing sites, require storm water detention or retention facilities (on- or off -site), if necessary, to prevent flooding due to run-off or where existing storm drainage facilities are unable to accommodate increased storm water drainage.*

Impact 3.9-4 General Plan implementation could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site (Less than Significant)

Implementation of the General Plan could result in future development within and near existing waterways, including creeks, streams, or drainage channels, which could alter existing drainage patterns. The General Plan would allow for development near an existing stream/river, including Alhambra Creek and adjacent areas within the watershed, which could increase the amount of impervious surfaces, and could alter existing drainage patterns, and result in flooding.

Additionally, individual future projects developed after adoption of the General Plan could potentially alter surface drainage patterns as a result of directly altering flow patterns, or placing structures in a floodway, all of which could yield increased amounts of stormwater runoff. The construction activities associated with future projects, such as commercial, residential and industrial developments, as well as road widenings, and other infrastructure projects that convert permeable surfaces or install permanent structures would require stormwater drainage management measures to avoid flooding impacts.

Although development allowed under the General Plan would be within close proximity of creeks, and drainage areas, the General Plan includes many policies that would protect and preserve creeks, establish development limitations within close proximity of existing waterways, and limit the amount of impervious surfaces throughout the Planning Area. As described in impact 3.9-3, numerous requirements under the new General Plan will reduce the potential for significant alterations of stream channels within the Planning Area.

The City of Martinez has developed the General Plan to include goals, policies, and implementation measures that, when implemented, will reduce impacts to local waterways. Goal OSC-G-9 aims to preserve and enhance the Quality of Surface and Groundwater Resources. Goal OSC-G-10 improves cooperative planning between all agencies within each watershed-wide area. Goals OSC-G-9 and OSC-G-10 are supported by a variety of policies and implementation measures including: OSC-P-2.2 that discourages large scale alterations of the topography to prevent severe erosion and

hydrologic hazard through planning and engineering review of soils and hydrology reports. OSC-I-9.1d enforces development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways. OSC-I-6.1d continues the incorporation of measures that reduce runoff and control stormwater. OSC-I-9.1b requires new development to incorporate treatment measures, site design techniques, and source controls to address stormwater runoff pollutant discharges, and prevent increase in runoff rates in development projects. OSC-P-8.4 requires that all hilly areas, abide by grading practices for drainage purposes that restore natural patterns of surface water run-off with respect to volume of flow. OSC-P-9.1 ensures grading, filling and construction activity near watercourses be conducted in a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution. OSC-9.1.b continues the collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management. OSC-P-10.1 supports the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions. OCS-I-10a supports collaborative work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality. OCS-I-11.1b continues to implement the Alhambra Creek Enhancement Program as both public CIP projects and through condition of approval places on development adjacent to Alhambra Creek. Additionally the Land Use and Public Safety Elements provide implementation measures aimed at waterway enhancement and impact avoidance including: LU-3.1a that considers zoning ordinance amendments to require that all new development along a creek or adjacent to a natural watercourse prepare a creek/watercourse preservation and protection plan. LU-3.1b considers the formulation of regulations to include required setbacks from the streams, creeks and watercourses to protect the resource, habitat and any recreation value associated therewith, and LU-3.1c requires development plans to include urban water runoff plans that protect adjacent waterways. Policy PS-P-6.2 requires new developments to be designed to minimize flooding hazards and to limit the amount of runoff that contributes to flooding. Policy PS-P-6.6 requires construction of storm drainage facilities and Low Impact Development techniques for new development. Measures PS-I-6.d and PS-I-6.2b require new development to limit impervious coverage to reduce excessive runoff and promote use of permeable paving and surfaces where appropriate. PS-I–6.1f requires individual development projects located in areas subject to flooding to reduce or alleviate flood hazard conditions through preparation of hydrological studies and incorporation of mitigation measures. Individual development project mitigation shall demonstrate, through qualified engineering analyses, that no adverse flooding impacts are created by development on upstream and downstream properties in the project vicinity.

Furthermore, the City initially adopted a Floodplain Ordinance in 1995, under Chapter 15.30 “Floodplain Management” of the City’s Municipal Code. The Ordinance was further updated in July 2015 to reflect FEMA’s required revisions, and provides additional clarifications to assist residents and City staff to administer the floodplain management measures. It is based on California Model Floodplain Management Ordinance for Coastal Communities developed in 2006 by the State Department of Water Resources to meet the minimum requirements of the National Flood Insurance Program (NFIP).

Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. The implementation of the policies contained in the Conservation and Open Space Element, Land Use Element, and Public Safety Element described above, as well as compliance with the updated City Floodplain Management Ordinance, are intended to ensure that development in the Martinez Planning Area protects drainage patterns to reduce flood potential throughout the Planning Area. The City of Martinez has developed the General Plan to enhance natural storm drainage, floodway improvement features, and measures to ensure impacts to local waterways are minimized through avoidance and conditions requiring hydrologic studies, which will reduce on-and-offsite flood impacts. The implementation of the following policies would ensure that the General Plan would have a **less than significant** impact relative to this topic.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OSC-G-9 *Preserve and Enhance the Quality of Surface and Groundwater Resources.*

OSC-G-10 *Improve cooperative planning between all agencies within each Watershed-wide area.*

Policies

OSC-P-2.2 *Discourage the large scale alteration of the topography to accommodate incompatible development patterns to prevent severe erosion and hydrologic hazard through planning and engineering review of soils and hydrology reports.*

OSC-P-8.4 *In all hilly areas, grading practices for drainage purposes should restore natural patterns of surface water run-off with respect to volume of flow.*

OSC-P-9.1 *Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.*

OSC-P-10.1 *Support the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions.*

Implementation Measures

OSC-I-9.1d *Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.*

OSC-I-6.1 d *Continue to incorporate measures to reduce runoff and control stormwater.*

OSC-I-9.1b *Require new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects.*

OSC-9.1.b *Continue to work in collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management.*

OCS-I-10a *Continue to work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality.*

OCS-I-11.1b *Continue to implement the Alhambra Creek Enhancement Program as both public CIP projects and through condition of approval places on development adjacent to Alhambra Creek.*

Land Use Element

Implementation

LU-3.1a *Consider zoning ordinance amendments to require that all new development along a creek or adjacent to a natural watercourse prepare a creek/watercourse preservation and protection plan.*

LU-3.1b *Consider the formulation of regulations to include required setbacks from the streams, creeks and watercourses to protect the resource, habitat and any recreation value associated therewith.*

LU-3.1c *Require development plans to include urban water runoff plans that protect adjacent waterways.*

Safety Element

Policies

PS-P-6.2 *Design new developments to minimize hazards associated with flooding and limit the amount of runoff that contributes to flooding.*

PS-P–6.6 *Require construction of storm drainage facilities and Low Impact Development (LID) techniques for new development.*

Implementation Measures

PS-I-6.1d *Limit the amount of impervious coverage by new development or existing developments during improvements to reduce potential hazards of excessive runoff. Strongly encourage pervious pavement for driveways and other hardscape.*

PS -I–6.1f *Require individual development projects located in areas subject to flooding to reduce or alleviate flood hazard conditions through preparation of hydrological studies and incorporation of mitigation measures. Individual development project mitigation shall demonstrate, through qualified engineering analyses, that no adverse flooding impacts are created by development on upstream and downstream properties in the project vicinity. Compliance requirements shall be consistent with those prescribed in the Municipal Code.*

PS-I-6.2b *When feasible, promote the use of permeable paving or similar improvements in constructing patios, walkways, paths, driveways, and parking areas as a means of increasing natural percolation while reducing impacts to the City's storm drainage system.*

PS-I- 6.2c *Require new development to construct and dedicate to the City as appropriate necessary infrastructure improvements to support proposed projects.*

PS-I- 6.2d *Require new development to maintain drainage infrastructure improvements serving such development.*

PS–I-6.6 a *As a condition of approval for new development and redevelopment of existing sites, require storm water detention or retention facilities (on- or off -site), if necessary, to prevent flooding due to run-off or where existing storm drainage facilities are unable to accommodate increased storm water drainage.*

Impact 3.9-5 General Plan implementation could create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (Less than Significant)

The City of Martinez has historically had stormwater drainage problems and associated flooding near Alhambra Creek. The General Plan provides for additional development within the planning area that could create new impervious surfaces throughout the Planning Area.

Individual future projects developed after adoption of the General Plan could create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of pollutants. Anticipated runoff contaminants include sediment, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and non-stormwater runoff could degrade the quality of receiving waters. During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants would be transported via runoff to stormwater drainage systems. Contaminated runoff waters could flow into the stormwater drainage systems that discharge into rivers, agricultural ditches, sloughs, and channels and ultimately could degrade the water quality of any of these water bodies.

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at this planning level is not feasible. However, each future development project is required to prepare a detailed project specific drainage plan and a Storm Water Pollution Prevention Plan (SWPPP) that will control stormwater runoff, both during and after construction. The City must also evaluate individual projects as they are proposed to ensure that they would not result in a significant increase in runoff. Individual development projects proposed for the Planning Area will be required to undergo project-specific environmental review. If project-level hydrology and water quality impacts are identified, specific mitigation measures would be required under CEQA.

The Open Space and Conservation, and Public Safety Elements of the General Plan include a number of related goals, policies, and implementation measures that would protect and enhance natural waterways, reducing stormwater runoff, and increasing water quality through runoff prevention, restoration, and maintenance of local waterways. OSC-I-6.1c continues to implement Zoning Guidelines for landscaping to absorb pollutants. OSC-I-6.1d continues to incorporate

measures to reduce runoff and control stormwater. OSC-I-9.1a supports the Contra Costa Clean Water Program and continue to implement a stormwater clean water program to reduce pollutants according to NPDES mandates. OSC-I-9.1b requires new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects. OSC-I-9.1c reduces impervious surface areas associated with projects and encourage the design that reduces stormwater flow and volume. OSC-I-9.1d enforces development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways. OSC-I-9.1e encourages the use of natural landscape designs and features that incorporate stormwater detention and retention in development projects. OSC-I-9.1f supports the use of green roofs to reduce runoff flow rates and volume, and absorb and filter pollutants. OSC-I-9.1g requires the city to continue to strengthen the City's Water Conservation in Landscape Ordinance, update when necessary. OSC-I-9.1i supports the efforts of Contra Costa County Sanitation District with respect to their reclaimed water management project. OSC-P-8.2 regulates overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin, and prohibits (when feasible) the construction of impermeable surfaces over permeable soil and geologic areas or the removal of permeable soils by extensive grading and scraping practices. OSC-P-8.4 supports, grading practices for drainage purposes that restore natural patterns of surface water run-off with respect to volume of flow. OSC-P-9.1 requires grading, filling and construction activity near watercourses to be conducted in a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution. OSC-9.1.a continues the application of the National Pollutant Discharge Elimination System C.3 regulations, including the use of permeable surfaces. OSC-9.1.b supports collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management. OSC-P-9.2 supports efforts to phase out the use of long-lived synthetic compounds, such as pesticides and vehicle anti-freeze, and certain naturally occurring substances which do not biodegrade, and encourages efforts to change manufacturing processes to use biodegradable materials, recycle manufactured products, reuse by-products, and use "green" products. OSC-P-9.3 encourages retailers to stock nontoxic alternatives to hazardous products. OSC-P-9.4 continues to promote the proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems. OSC-P.9.5 supports alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages. OSC-9.5.a supports the use of vegetated areas to absorb and filter the fertilizers, pesticides and other run off pollutants. PS-I- 6.2c requires new development to construct and dedicate to the City as appropriate necessary infrastructure improvements to support proposed projects. PS-I- 6.2d requires new development to maintain drainage infrastructure improvements serving such development.

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act,

Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.). The City requires all development projects subject to NPDES requirements to obtain the appropriate permits prior to development.

The City of Martinez Clean Water Program serves to radically reduce or eliminate pollutants from entering the municipal storm drain system. Through activities known as best management practices or BMP's, the City conducts municipal maintenance (e.g., street sweeping and catch basin cleaning), public education and outreach, new development and construction controls, illicit discharge control activities, monitoring and special studies, and watershed management activities.

Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. The implementation of the policies contained in the Open Space and Conservation, and Public Safety elements, as well as compliance with the NPDES program requirements, as described above, are intended to ensure that development in the Martinez Planning Area protects drainage patterns and reduces the potential for polluted runoff throughout the Planning Area. The City of Martinez has developed the General Plan to enhance storm drainage, infiltration, and funding for improvement features, which will reduce on-and-offsite runoff impacts, while decreasing polluted runoff. The policies identified include numerous requirements that would reduce the potential for implementation of the General Plan to result in increased impacts to stormwater drainage systems, or provide substantial additional sources of polluted runoff. The implementation of these policies would ensure that implementation of the General Plan would have a **less than significant** impact.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OSC-G-10 *Improve cooperative planning between all agencies within each Watershed-wide area.*

Policies

OSC-P-8.2 *Regulate overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin. Unless absolutely necessary, prohibit the construction of impermeable surfaces over permeable soil and geologic areas or the removal of permeable soils by extensive grading and scraping practices.*

OSC-P-8.4 *In all hilly areas, grading practices for drainage purposes should restore natural patterns of surface water run-off with respect to volume of flow.*

OSC-P-9.1 *Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.*

OSC-P-9.2 *Support efforts to phase out the use of long-lived synthetic compounds, such as pesticides and vehicle anti-freeze, and certain naturally occurring substances which do not biodegrade. Encourage efforts to change manufacturing processes to use*

biodegradable materials, recycle manufactured products, reuse by-products, and use "green" products.

OSC-P-9.3 *Encourage retailers to stock nontoxic alternatives to hazardous products.*

OSC-P-9.4 *Continue to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems.*

OSC-P.9.5 *Support alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages.*

OSC-P-10.1 *Support the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions.*

Implementation Measures

OSC-I-6.1 c *Continue to implement Zoning Guidelines for landscaping to absorb pollutants.*

OSC-I-6.1 d *Continue to incorporate measures to reduce runoff and control stormwater.*

OSC-I-9.1a *Support the Contra Costa Clean Water Program and continue to implement a stormwater clean water program to reduce pollutants according to NPDES mandates.*

OSC-I-9.1b *Require new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects.*

OSC-I-9.1c *Reduce impervious surface areas associated with projects and encourage the design that reduces stormwater flow and volume.*

OSC-I-9.1d *Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.*

OSC-I-9.1e *Encourage the use of pest resistant and drought tolerant landscape design and features, and promote the use of design that incorporates stormwater detention and retention in development projects.*

OSC-I-9.1f *Support the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants, supply green habitat and nesting areas and help lower urban heat island effect.*

OSC-I-9.1g *Continue to strengthen the City's Water Conservation in Landscape Ordinance, update when necessary.*

OSC-I-9.1h *When appropriate utilize the Bay friendly Landscape Guidelines in order to reduce water consumption.*

OSC-I-9.1i *Support the efforts of Contra Costa County Sanitation District with respect to their reclaimed water management project.*

OSC-I-9.1j *Promote reclamation and reuse of wastewater for irrigation and to recharge aquifers.*

OSC-9.1.a *Continue to apply current National Pollutant Discharge Elimination System C.3 regulations, including the use of permeable surfaces.*

OSC-9.1.b *Continue to work in collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management.*

OSC-9.5.a *Where feasible, a requirement of project approval should be the use vegetated areas to absorb and filter the fertilizers, pesticides and other run off pollutants*

OCS-I-10a *Continue to work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality.*

Public Safety Element

Goals

PS-G-6 *Minimize feasible risks to life and property resulting from flooding and flood induced hazards.*

Policies

PS-P-6.2 *Design new developments to minimize hazards associated with flooding and limit the amount of runoff that contributes to flooding.*

Implementation Measures

PS-I-6.1d *Limit the amount of impervious coverage by new development or existing developments during improvements to reduce potential hazards of excessive runoff. Strongly encourage pervious pavement for driveways and other hardscape.*

PS-I-6.2b *When feasible, promote the use of permeable paving or similar improvements in constructing patios, walkways, paths, driveways, and parking areas as a means of increasing natural percolation while reducing impacts to the City's storm drainage system.*

PS-I- 6.2c *Require new development to construct and dedicate to the City as appropriate necessary infrastructure improvements to support proposed projects.*

PS-I- 6.2d *Require new development to maintain drainage infrastructure improvements serving such development.*

Impact 3.9-6 General Plan implementation could otherwise substantially degrade water quality (Less than Significant)

Water Quality Impacts from Discharges to 303(d) Listed Water Bodies: Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The Planning Area has two water bodies listed on the 2010 Section 303(d) list of impaired water bodies. Grayson Creek and the Carquinez Strait are listed as Category 5 segments, which are water

segments where standards are not met and a TMDL is required, but not yet completed for at least one of the pollutants being listed for this segment.

- Grayson Creek: The pollutant listed for this segment is trash originating from illegal dumping and urban runoff/storm sewers. The estimated size of the area affected is seven miles. The TMDL is estimated to be completed by 2021.

- The Carquinez Strait: The pollutants listed for this segment include: Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Dioxin compounds, Furan Compounds, Invasive Species, Mercury, Polychlorinated biphenyls (PCBs), and Selenium. The estimated size of the area affected is 5,657.31 Acres. The TMDL is estimated to be completed by 2019 for all pollutant compounds.

The Contra Costa Clean Water Program (CCCWP) was established in 1991 in response to the federal stormwater regulations. The CCCWP comprises Contra Costa County, its 19 cities/towns (including Martinez), and the Contra Costa County Flood Control and Water Conservation District. Contra Costa is within the jurisdiction of two Water Boards – San Francisco Bay Water Board (which includes Martinez), and the Central Valley Water Board.

This Order requires implementation of Best Management Practices (BMPs) to reduce the level of pollutants in stormwater to the maximum extent practicable. Some of the more notable requirements are summarized below. Each of the members of the CCCWP are called permittees in the discussion below:

- The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater into storm drain systems and watercourses. It shall be prohibited to discharge rubbish, refuse, bark, sawdust, or other solid wastes into surface waters.

- Permittees shall use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating the stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

- Each Permittee shall implement an industrial and commercial site control program at all sites which could reasonably be considered to cause or contribute to pollution of stormwater runoff, with inspections and effective follow-up and enforcement to abate actual or potential pollution sources.

- Permittees shall develop and implement an illicit discharge program that includes an active surveillance component and a centralized complaint collection and follow-up component to prevent illicit discharge into stormwater. Permittees shall maintain a complaint tracking and follow-up data system.
- Each Permittee shall implement a construction site inspection and control program at all construction sites.
- Through outreach programs, each Permittee shall increase the knowledge of residents regarding the impacts of stormwater pollution on receiving water and potential solutions to mitigate the problems change, the waste disposal and runoff pollution generation behavior of residents by encouraging implementation of appropriate solutions, and involve various citizens in mitigating the impacts of stormwater pollution.
- Prevent the impairment of urban streams by pesticide-related toxicity.
- Reduce trash loads from municipal stormwater systems by 40% by 2015, 70% by 2018, and 100% by 2023.
- Implement a Total Mercury and Methylmercury control program.

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at this planning level is not feasible. However, each future development project is required to prepare a detailed project specific drainage plan and a Storm Water Pollution Prevention Plan (SWPPP) that will control storm water runoff and erosion, both during and after construction. If the project involves the discharge of dewatering into surface waters the project proponent will need to acquire a Dewatering Permit, NPDES permit and Waste Discharge permit from the RWQCB.

The City of Martinez has developed the General Plan to include policies that, when implemented, will reduce storm water pollution from new development and protect and enhance natural storm drainage and water quality features. The policies identified below include numerous requirements that would reduce the potential for General Plan implementation to result in increased water quality impacts. The implementation of these policies would ensure that implementation of the General Plan would have a **less than significant impact** to water quality.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Goals

OS-G-8	*Protection of water resource systems to maintain natural habitat within the Watershed and enhance the biological value of the City*
OSC-G-9	*Protect high quality water from pollutants and protect the resource.*
OSC-G-9	*Preserve and enhance the quality of surface and groundwater resources.*
OSC-G-10	*Improve cooperative planning between all agencies within each watershed-wide area.*

Policies

OSC-P-8.1 *Water resources such as the Alhambra Creek Watershed, wetlands, flood plains, recharge zones, riparian areas, open space and native or natural habitat should be preserved.*

OSC-P-9.1 *Protect and improve the quality of water in all of Martinez's watersheds, creeks, and water bodies.*

OSC-P-9.1 *Enforce Federal State and local mandate regarding water quality such as the National Pollutant Discharge Elimination System (NPDES).*

OSC-P-9.1 *Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.*

OSC-P-9.2 *Support efforts to phase out the use of long-lived synthetic compounds, such as pesticides and vehicle anti-freeze, and certain naturally occurring substances which do not biodegrade. Encourage efforts to change manufacturing processes to use biodegradable materials, recycle manufactured products, reuse by-products, and use "green" products.*

OSC-P-9.3 *Encourage retailers to stock nontoxic alternatives to hazardous products.*

OSC-P-9.4 *Continue to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems.*

OSC-P.9.5 *Support alternatives to impervious surfaces in new development, re-use and/or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages.*

OSC-P-10.1 *Support the formation of an inter-jurisdictional group to consider issues that affect watersheds across jurisdictions.*

Implementation

OSC-I-8.1a *Require proposed projects located near watersheds or riparian areas to protect the natural resource consistent with flood management and recharge objectives.*

OSC-I-8.1b *Consider completion and adoption of an Alhambra Creek Watershed Management Plan*

OSC-I-9.1a *Review all projects in watershed to limit damage and preserve quality of water insuring proper mitigation measures as part of development.*

OSC-I-9.1b *Manage storage of hazardous materials, especially underground tanks that may leak into existing waterways.*

OSC-I-9.1c *Consider the establishment of buffers between development and water resources to prevent contamination of the water from urban pollutants.*

OSC-I-9.1a *Support the Contra Costa Clean Water Program and continue to implement a stormwater clean water program to reduce pollutants according to NPDES mandates.*

OSC-I-9.1b *Require new development to incorporate treatment measures, site design techniques and source controls to address stormwater runoff pollutant discharges and prevent increase in runoff rates in development projects.*

OSC-I-9.1c *Reduce impervious surface areas associated with projects and encourage the design that reduces stormwater flow and volume.*

OSC-I-9.1d *Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.*

OSC-I-9.1e *Encourage the use of pest resistant and drought tolerant landscape design and features, and promote the use of design that incorporates stormwater detention and retention in development projects.*

OSC-I-9.1f *Support the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants, supply green habitat and nesting areas and help lower urban heat island effect.*

OSC-I-9.1g *Continue to strengthen the City's Water Conservation in Landscape Ordinance, update when necessary.*

OSC-I-9.1h *When appropriate utilize the Bay friendly Landscape Guidelines in order to reduce water consumption.*

OSC-I-9.1i *Support the efforts of Contra Costa County Sanitation District with respect to their reclaimed water management project.*

OSC-I-9.1j *Promote reclamation and reuse of wastewater for irrigation and to recharge aquifers.*

OSC-9.1.a *Continue to apply current National Pollutant Discharge Elimination System C.3 regulations, including the use of permeable surfaces.*

OSC-9.1.b *Continue to work in collaboration with the Contra Costa County Flood Control and Water Conservation District to develop and enact best management practices for storm water management.*

OSC-9.5.a *Where feasible, a requirement of project approval should be the use vegetated areas to absorb and filter the fertilizers, pesticides and other run off pollutants*

OCS-I-10a *Continue to work with other jurisdictions, including the creation of an inter-jurisdictional group to coordinate strategies addressing preservation and enhancement of watershed-wide water quality.*

Land Use Element

Policies

LU-P-3.1 *Protect perennial and intermittent streams, creeks and watercourses from pollution which can be caused by such activity as dumping sewage, landscape runoff, pesticides, seepage, siltation or other discharges.*

LU-P-3.3 *To the extent possible, retain the channels, floodplains, riparian corridors (including suitable setbacks from top of bank) such as Alhambra Creek and its tributaries as significant open space areas. These areas should be maintained in their natural state to function as appropriate open space areas and to support a riparian habitat where feasible. Require where possible development within the Creek watersheds preserve watershed integrity, including natural vegetation, soil and slope stability, water quality, scenic values and potential archaeological resources.*

LU-P-9.2 *Control erosion in natural watercourses where creek capacity and bank stability necessitate, as per applicable creek preservation and improvement plan.*

Implementation Measures

LU-3.1a *Consider zoning ordinance amendments to require that all new development along a creek or adjacent to a natural watercourse prepare a creek/watercourse preservation and protection plan.*

LU-3.1b *Consider the formulation of regulations to include required setbacks from the streams, creeks and watercourses to protect the resource, habitat and any recreation value associated therewith.*

LU-3.1c *Require development plans to include urban water runoff plans that protect adjacent waterways.*

Impact 3.9-7 General Plan implementation could place housing and structures within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, and would not place within a 100 year flood hazard area structures which would impede or redirect flows (Less than Significant)

The Planning Area is subject to flooding problems along the natural creeks and drainages that traverse the area. There are three drainage basins within the Planning Area. These include: Grayson Creek, Vine Hill, and Alhambra Creek drainage basin.

Grayson Creek is a perennial stream with some intermittently flowing tributaries and drains much of the valley area of Pleasant Hill, as well as an area at the southernmost Martinez City limits.

Vine Hill Drainage Basin is an intermittent stream that drains roughly five to seven square miles of generally low rolling landscape between Martinez Ridge and Interstate 680.

Alhambra Creek is the most critical hydrologic system in the Martinez area. An intermittent stream draining 16 square miles and passing through urban areas of Martinez, it possesses the greatest flood risk within the city. Alhambra Creek is considered a flash drainage basin characterized by a rapid rise in flood peaks and rapid recessions. In addition, the section of the channel north of Main Street is influenced by tidal action. Alhambra Creek has received increasing amounts of surface flow runoff over the years with the rise in impervious surfaces in its urban reaches. Impervious surfaces such as concrete and asphalt prevent absorption of runoff and, in addition to swelling the

flow within the creek bed itself, excessive runoff may lead to overland sheet flow within the basin. The flooding of Downtown Martinez has been frequent winter occurrence.

The Planning Area has had a history of flooding, with the most recent major flood events occurring in the winter of 1997-98. Downtown Martinez is built in the floodplain of Alhambra Creek and falls within the 100-year flood plain established by the Federal Emergency Management Agency (FEMA). Projects completed in 2001-2002 worked to reduce the frequency of flooding in the downtown area. These projects widened and realigned a section of the creek, restored floodplains, and provided overflow and wetland areas to accommodate higher peak flows. Before this work took place, flooding frequency was estimated to be every 2 to 7 years. With these improvements, flooding will still occur about every 10 to 20 years. According to the 2002 report issued by the California Floodplain Management Task Force, The chance of a 100-year flood during a 30-year mortgage is calculated at 26%. Furthermore, the Planning Area has substantial flooding areas east of the city limits in the SOI east of interstate 680. The major land uses in this area are Open Space Preservation (OS/P), and Industrial and Manufacturing (I+M).

The Public Safety Element of the General Plan includes numerous policies and implementation measures specifically designed to address flood hazards. PS-P-6.1 prohibits new buildings in the 100 year flood zone as determined by the Federal Emergency Management Agency (FEMA) and as shown on the FEMA Flood Insurance Rate Maps (FIRM) unless sufficient mitigation can be provided of the area is removed from the flood zone. PS-P-6.2supports the design new developments to minimize hazards associated with flooding and limit the amount of runoff that contributes to flooding. PS-I-6.1b requires the evaluation of potential impacts to the flood control system during the environmental review process for new development.

The City of Martinez has developed the General Plan to include policies that, when implemented, will reduce flood hazard throughout the planning area. The policies identified below include numerous requirements that would reduce the potential for General Plan implementation to result in increased impacts related to flooding. The implementation of these policies would ensure that implementation of the General Plan would have a **less than significant** impact.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Public Safety Element

Goals

PS-G-6 *Minimize feasible risks to life and property resulting from flooding and flood induced hazards.*

PS-G – 7 *Increase community awareness of flooding hazards.*

Policies

PS-P-6.1 *Prohibit new buildings in the 100 year flood zone as determined by the Federal Emergency Management Agency (FEMA) and as shown on the*

	FEMA Flood Insurance Rate Maps (FIRM) unless sufficient mitigation can be provided of the area is removed from the flood zone
PS-P-6.2	*Design new developments to minimize hazards associated with flooding and limit the amount of runoff that contributes to flooding.*
PS-P - 6.3	*Continue to budget Capital Improvement Funds for flood control improvements as appropriate.*
PS-P - 6.4	*Work with FEMA to periodically update the City's FEMA flood maps.*
PS-P - 6.5	*Use local plans and groups to help identify flooding hazards and mitigation options.*
PS-P – 6.7	*Continue to implement flood hazard mitigation measures for areas subject to flooding.*
PS-P – 6.6	*Require construction of storm drainage facilities and Low Impact Development (LID) techniques for new development.*
PS-P – 6.8	*Allow the use of flood control and prevention measures for individual development applications where determined to be feasible and supported by qualified engineering documentation.*
PS-P – 6.9	*Utilize Best Management Practices (BMPs) to prevent storm water pollution from construction-related actions.*
PS-P – 7.1	*Implement a public outreach program to increase public awareness of storm water management issues and techniques for residents to mitigate storm water issues on their property.*
PS-P – 7.2	*Work closely with Contra Costa County in implementation of all applicable National Pollutant Discharge Elimination System (NPDES) requirements relative to storm drainage and storm water run-off.*

Implementation Measures

PS—I-6.1a	*Enforce the City's existing flood control ordinance and regulations, amending them as necessary to conform to the National Flood Insurance Program criteria and any proposed and appropriate ordinance.*
PS-I-6.1b	*The City will evaluate potential impacts to the flood control system during the environmental review process for new development. Hydrologic studies may be required to help determine potential impacts.*
PS-I-6.1c	*Facilitate creek restoration throughout the City to help mitigate the effects of flooding.*
PS-I-6.1d	*Limit the amount of impervious coverage by new development or existing developments during improvements to reduce potential hazards of excessive runoff. Strongly encourage pervious pavement for driveways and other hardscape.*
PS-I-6.1e	*Continue to coordinate with FEMA and other agencies in the evaluation and mitigation of future flooding hazards that may occur as a result of sea level rise.*
PS -I–6.1f	*Require individual development projects located in areas subject to flooding to reduce or alleviate flood hazard conditions through preparation*

	of hydrological studies and incorporation of mitigation measures. Individual development project mitigation shall demonstrate, through qualified engineering analyses, that no adverse flooding impacts are created by development on upstream and downstream properties in the project vicinity. Compliance requirements shall be consistent with those prescribed in the Municipal Code.
PS-I-6.2a	*Require new development to demonstrate existing and proposed drainage facilities both on and off site are sized to accommodate project storm runoff and to prevent off-site increase in peak runoff rates and flood elevations.*
PS-I-6.2b	*When feasible, promote the use of permeable paving or similar improvements in constructing patios, walkways, paths, driveways, and parking areas as a means of increasing natural percolation while reducing impacts to the City's storm drainage system.*
PS-I- 6.2c	*Require new development to construct and dedicate to the City as appropriate necessary infrastructure improvements to support proposed projects.*
PS-I- 6.2d	*Require new development to maintain drainage infrastructure improvements serving such development.*
PS- 6.3 a.	*Prepare annual budget requests to implement priorities and projects relating to flood protection as appropriate.*
PS –I- 6.4 a.	*Utilize FEMA's Cooperating Technical Partners Program to update the City's Flood Insurance Rate Maps.*
PS –I- 6.5a.	*Consider completion and implementation of a Local Hazard Mitigation Plan, consistent with the requirements of FEMA.*
PS–I-6.6 a.	*As a condition of approval for new development and redevelopment of existing sites, require storm water detention or retention facilities (on- or off-site), if necessary, to prevent flooding due to run-off or where existing storm drainage facilities are unable to accommodate increased storm water drainage.*
PS –I- 6.6 b.	*Consider requiring the use of native or compatible nonnative plant species indigenous to the site vicinity as part of the discretionary review of proposed developments.*
PS –I- 6.6 c.	*Require the use of innovative storm drainage facilities such as bioretention, rain gardens, and pervious pavement where appropriate and feasible.*
PS –I- 6.7 a.	*Employ drainage infrastructure improvements as appropriate and subject to funding constraints and continue maintenance activities as a collective program solution to flooding problems in areas subject to flooding.*
PS –I- 6.8a	*Review development applications for appropriate engineering measures to mitigate flood hazards.*
PS- I-6.9a	*Continue to coordinate with Contra Costa County National Pollutant Discharge Elimination System (NPDES) planning efforts. Continue implementation of the Regional Water Quality Board requirements for the*

	San Francisco region for the Municipal Regional Stormwater NPDES permit most importantly Section C.3 new development and redevelopment section.
PS-I-7.1a	*Using the City's website and newsletter, inform the public of areas subject to flooding, steps they can take to reduce potential property damage, and evacuation procedures to be followed in the event of a flooding emergency.*
PS-I- 7.1b	*Promote LID and other storm water management design techniques through public education and outreach. Provide information and tools for residents to implement these design techniques on their property.*

Impact 3.9-8: General Plan implementation could expose people or structures to inundation by seiche, tsunami, or mudflow (Less Than Significant with Mitigation)

Tsunami: A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunamis can cause catastrophic damage to shallow or exposed shorelines. The Planning Area is not immediately adjacent to the open Ocean or San Francisco Bay, which are the most significant water bodies posing a tsunami risk in the region. A portion of the Planning Area is, however, along the waterfront of the Carquinez Strait, which feeds to the San Francisco Bay and ultimately to the open Ocean. As such, the waterfront area is at risk of inundation from tsunamis that could be generated in the open Ocean, San Francisco Bay, or Carquinez Strait. The area that is at risk of inundation from tsunamis along the waterfront is mostly mudflats, and is designated open space or parks and recreation. Recreation and waterfront facilities could be developed in this area and could expose users and employees to potential tsunami impacts.

Seiches: Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influences by the external causes. The Planning Area is located in close proximity to the Carquinez Strait and Suisun Bay (semi-confined water body) that could pose a significant risk from a seiche similar to that of a tsunami threat. Safety Element policy PS-P-9.1, requires the use of the City's Emergency Response Plan (ERP) as the guide for emergency management in Martinez. However, the response plan does not identify specific protocol for tsunami and seiche events. Therefore, it is recommended that the City update its ERP and General Plan to include policy relating to tsunami and seiche events.

With implementation of the following mitigation measure, impacts relating tsunami and seiche events is reduced to a **less than significant** impact **with mitigation.**

MITIGATION MEASURES

Mitigation Measure Hydro-1: The City shall add policies that specifically address the potential for new development to expose people or structures to inundation by seiche, and tsunami events. An example policies is provided below:

- *Policy: The City shall coordinate with the East Bay Regional Parks District (EBRPD), and the Contra Costa County Flood Control and Water Conservation District to define evacuation routes, and efficiently evacuate shoreline parks and facilities during potential tsunami and seiche events*.

- *Policy: Unless otherwise mitigated, require new structures to be located outside of the Tsunami and Seiche inundation zone to the greatest extent feasible.*

Mudflow: A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits.

Known landslides are particularly prevalent in the Alhambra Hills, although they are extensive in other scattered locations throughout the hilly portions of the Martinez Planning Area. Expansive soils or soil of high shrink-swell properties dominate the Martinez area hills and are also distributed in creek and valley bottoms, such as the Alhambra Valley, and the Grayson and Pacheco creek beds.

The Open Space and Conservation, and Safety Element of the General Plan include a number of related policies that would protect residents and structures, and decreases effects of mudflow events. Policies addressing mudflow events within the planning area address vegetative cover, reducing the potential for earthflows, keeping vast amounts of Open Space in areas that are high in relief, and through grading practices and soil reports for hillside construction activities. Policy OSC-P-2.1 allows for the preservation of open space as a means of reducing the risk of natural hazards. OSC-P-2.2 discourages large scale alteration of the topography to accommodate incompatible development patterns to prevent severe erosion and hydrologic hazard through planning and engineering review of soils and hydrology reports. OSC-P-2.3 encourages grading alterations that do not induce, or accelerate natural channel grading, sheet erosion, gullying and other forms of erosion, through adoption of conditions of approval as part of the development process. OSC-P-8.2 regulates overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin. PS-P-3.1 considers prohibiting construction of buildings, roads, and utilities in landslide-prone hillsides, and PS–I- 3.1.b requires new development and redevelopment projects in hillside areas to address potential for slope failure, soil subsidence and related geologic events, and recommend measures to minimize hazards.

Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. The implementation of the policies contained in the Conservation and Open Space Element, and Safety Element, as described above are intended to ensure that development in the Martinez Planning Area protects and enhances areas within Planning Area to

reduce the effects of mudflow events. The implementation of these policies would ensure that implementation of the General Plan would have a **less than significant** impact to mudflow events.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Open Space and Conservation Element

Policies

OSC-P-2.1 *Encourage the preservation of open space as an attractive means of reducing the risk of natural hazards.*

OSC-P-2.2 *Discourage the large scale alteration of the topography to accommodate incompatible development patterns to prevent severe erosion and hydrologic hazard through planning and engineering review of soils and hydrology reports.*

OSC-P-2.3 *Encourage grading alterations which do not induce or accelerate natural channel grading, sheet erosion, gullying and other forms of erosion, through adoption of conditions of approval as part of the development process.*

OSC-P-8.2 *Regulate overgrazing, clearing, burning, and other activities which could reduce vegetation cover within the Alhambra Creek Drainage Basin. Unless absolutely necessary, prohibit the construction of impermeable surfaces over permeable soil and geologic areas or the removal of permeable soils by extensive grading and scraping practices.*

OSC-P-8.4 *In all hilly areas, grading practices for drainage purposes should restore natural patterns of surface water run-off with respect to volume of flow.*

OSC-P-9.1 *Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.*

OSC-P-12.1 *The City will where feasible protect and preserve open space and remaining natural areas, including, oak/woodland, riparian vegetation, creeks, saltwater and freshwater marsh, native grasslands, wildlife corridors and sensitive nesting and habitat areas.*

Public Safety Element

Policies

PS-P-3.1 *Consider prohibiting construction of buildings, roads, and utilities in landslide-prone hillsides.*

Implementation Measures

PS –I- 3.1.b *Geotechnical Reports. Require new development and redevelopment projects in hillside areas or areas subject to subsidence to submit a geologic investigation and a report by a qualified engineering geologist with application materials. The reports shall address potential for slope*

failure, soil subsidence and related geologic events, and recommend measures to minimize hazards.

Impact 3.9-9: General Plan implementation could expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of failure of a levee or dam (Less Than Significant with Mitigation)

Earthquakes centered close to a dam are typically the most likely cause of dam failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. The Planning Area has one dam that is identified by the Division of Safety of Dams and Bureau of Reclamation; the Martinez Dam is briefly described below:

The Martinez Dam is a Central Valley Project (CVP) in Contra Costa County, which contains the Martinez Reservoir. The dam was constructed by earth fill between 1946-1947 and is owned by the U.S. Bureau of Reclamation. The dam has a drainage area of 40.0 sq mi, and an elevation of 72 feet. The total storage capacity is 268 AF. The reservoir's surface area is 13 acres, and has a Spillway Capacity of 53 CFS.

Martinez Reservoir is impounded in a small, north facing valley at the eastern edge of the City of Martinez. The site is situated on the northeast margin of the East Bay hills which are, in the immediate reservoir vicinity, rounded low hills rising to elevations of 200 feet or less. To the west and south, the topographic relief increases to 600 feet or more along prominent ridges and hills underlain by folded Tertiary and Cretaceous strata which strike generally NW-SE. Approximately two miles north of the reservoir, the Sacramento River flows westward from Suisun Bay through the Carquinez Strait. At the reservoir site, the hills are underlain by moderately hard Tertiary sandstone and minor shale, commonly mantled by thin alluvial cover. The bedrock strata dips moderately to the southwest of the reservoir. Minor, discontinuous faults locally cut the bedrock, but so not significantly disrupt the overall northwest tending synclinal structure. Throughout the site vicinity, alluvium, stream channel deposits, and artificial fill apron the hills and underlie the lower ground.

The Martinez Dam does not have a history of dam failure. However, it is identified as having the potential to inundate habitable portions of the Planning Area in the unlikely event of dam failure. The dam owners/operators, U.S. Bureau of Reclamation, and Contra Costa Water District are responsible for the management, monitoring, and improvements to the Martinez dam to reduce the risk of dam failure and inundation. The General Plan includes policies and implementation measures that requires the City to maintain and update emergency response plans, and ensures that emergency responders are adequately trained (PS-I-9.1d and PS-P-10.2). Additionally, the General Plan includes policies and implementation measures that ensure the safety of structures from seismic induced hazards (PS-P-1.1, and PS-P-2.1). However to ensure the safety of the community regarding dam inundation, it is recommended that the General Plan also include policy relating to the maintenance and monitoring of the Martinez Dam and Reservoir.

Mitigation Measure Hydro-2: The City shall add a policy that specifically addresses the potential for General Plan Implementation to expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of failure of a levee or dam. An example policy is provided below:

- *The City shall coordinate with agencies responsible for the maintenance and monitoring of the Martinez Dam, to ensure that dam infrastructure is maintained and enhanced to withstand potential failure during an earthquake.*

The General Plan policies identified include requirements that would reduce the potential for General Plan implementation to result in increased impacts from inundation by dam or levee failure. The implementation of these policies contained within the General Plan along with the following mitigation measures would result in a less **than significant impact with mitigation** incorporated.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Public Safety Element

Goals

PS-G-9 Be Prepared to Act in Emergency Situations.

Policies

PS-P-1.1 Assure existing and proposed structures are designed to contemporary standards for seismic safety.

PS-P-9.1 Use the City's Emergency Response Plan as the guide for emergency management in Martinez.

PS-P-1.1 Assure existing and proposed structures are designed to contemporary standards for seismic safety.

PS-P-2.1 Continue to use structural design criteria, codes, and other programs and policies to protect the public from seismic effects, such as, liquefaction, seismic response of unconsolidated geologic formations, collapse-hazard buildings, and other seismic-induced failures of existing structures.

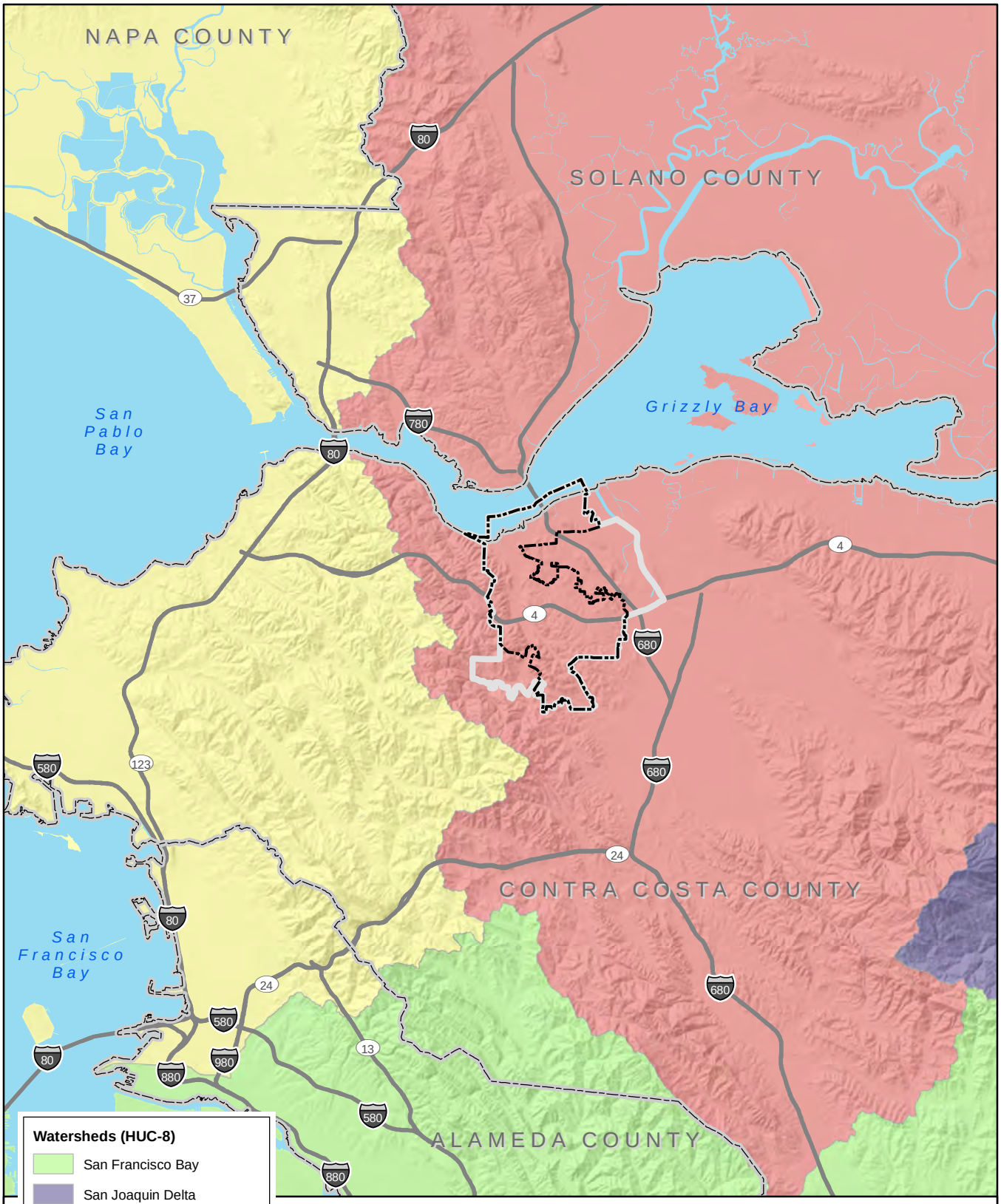
PS-P-10.2 Maintain a current disaster management operations plan and adequately train personnel. This includes annual training of City employees.

Implementation

PS-I-9.1c Evaluate the City's Emergency Operations center on an annual basis to verify that it is adequately equipped.

PS-I-9.1d Maintain and update the City's Emergency Response Plan on a regular basis, designating emergency shelters and evacuation routes.

PS--10.1a Provide annual training for city employees and update the emergency preparedness.



CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.9-1: Watersheds

HUC-8

Data sources: City of Martinez GIS; ESRI's StreetMap North America; USDA NRCS GeoSpatial Data Gateway. Map date: October 28, 2014. (MartinezGPEIR_HUC8_Fig3-8-1_141028)

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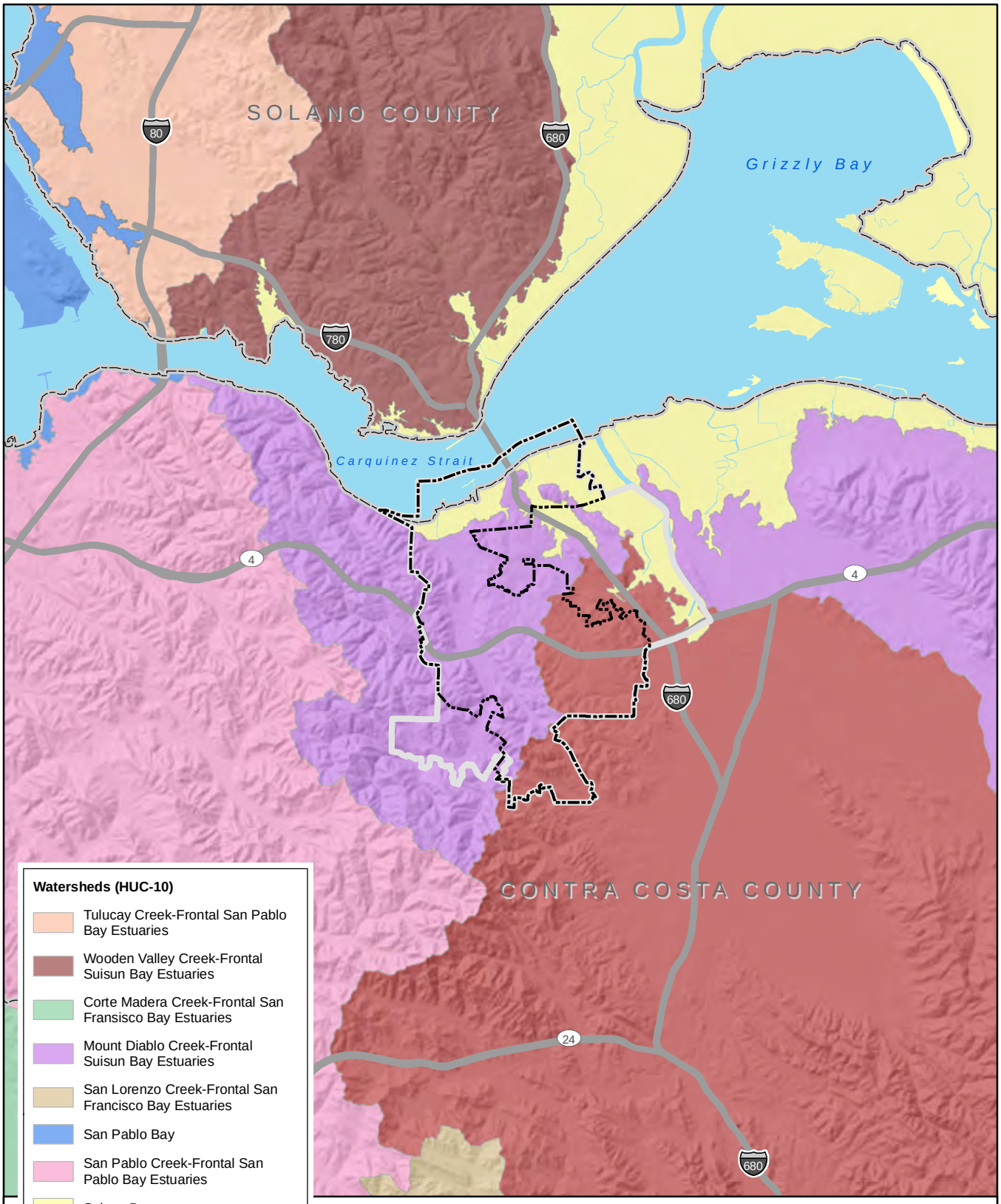

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.9-2: Watersheds

HUC-10

Data sources: City of Martinez GIS; ESRI's StreetMap North America; USDA NRCS GeoSpatial Data Gateway. Map date: October 28, 2014. (MartinezGPEIR_HUC10_Fig3-8-2_141028)

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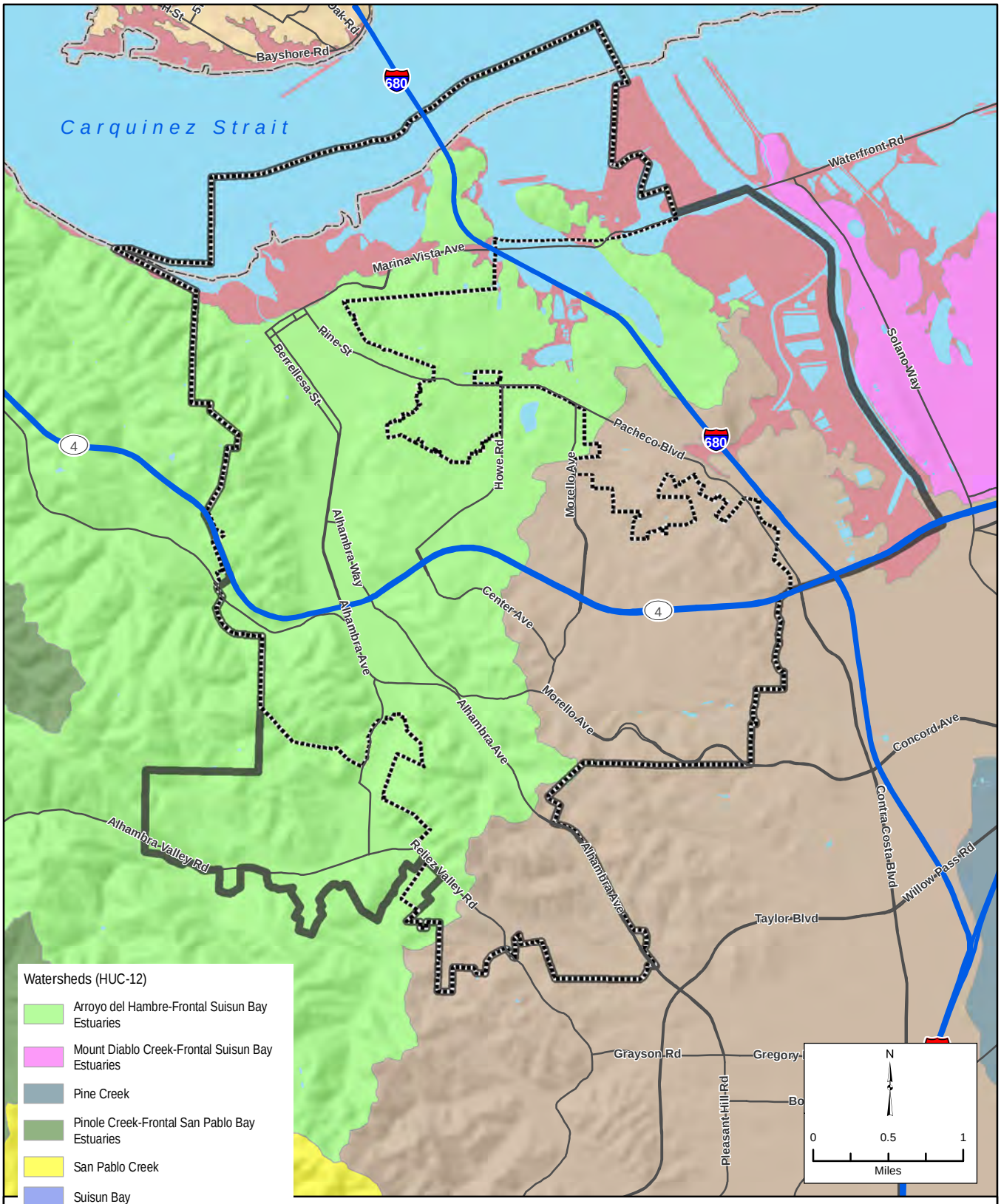

Watersheds (HUC-12)

- Arroyo del Hambre-Frontal Suisun Bay Estuaries
- Mount Diablo Creek-Frontal Suisun Bay Estuaries
- Pine Creek
- Pinole Creek-Frontal San Pablo Bay Estuaries
- San Pablo Creek
- Suisun Bay
- Suisun Bay Estuaries
- Suisun Bay Islands
- Walnut Creek-Frontal Suisin Bay Estuaries
- American Canyon-Frontal Suisun Bay Estuaries

Planning Areas

- Martinez City Limit
- Martinez Sphere of Influence

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.9-3: Watersheds

HUC-12

Data sources: City of Martinez GIS; ESRI's StreetMap North America; USDA NRCS GeoSpatial Data Gateway.
Map date: October 29, 2014. (MartinezGPEIR_HUC12_Fig3-8-3_141029)

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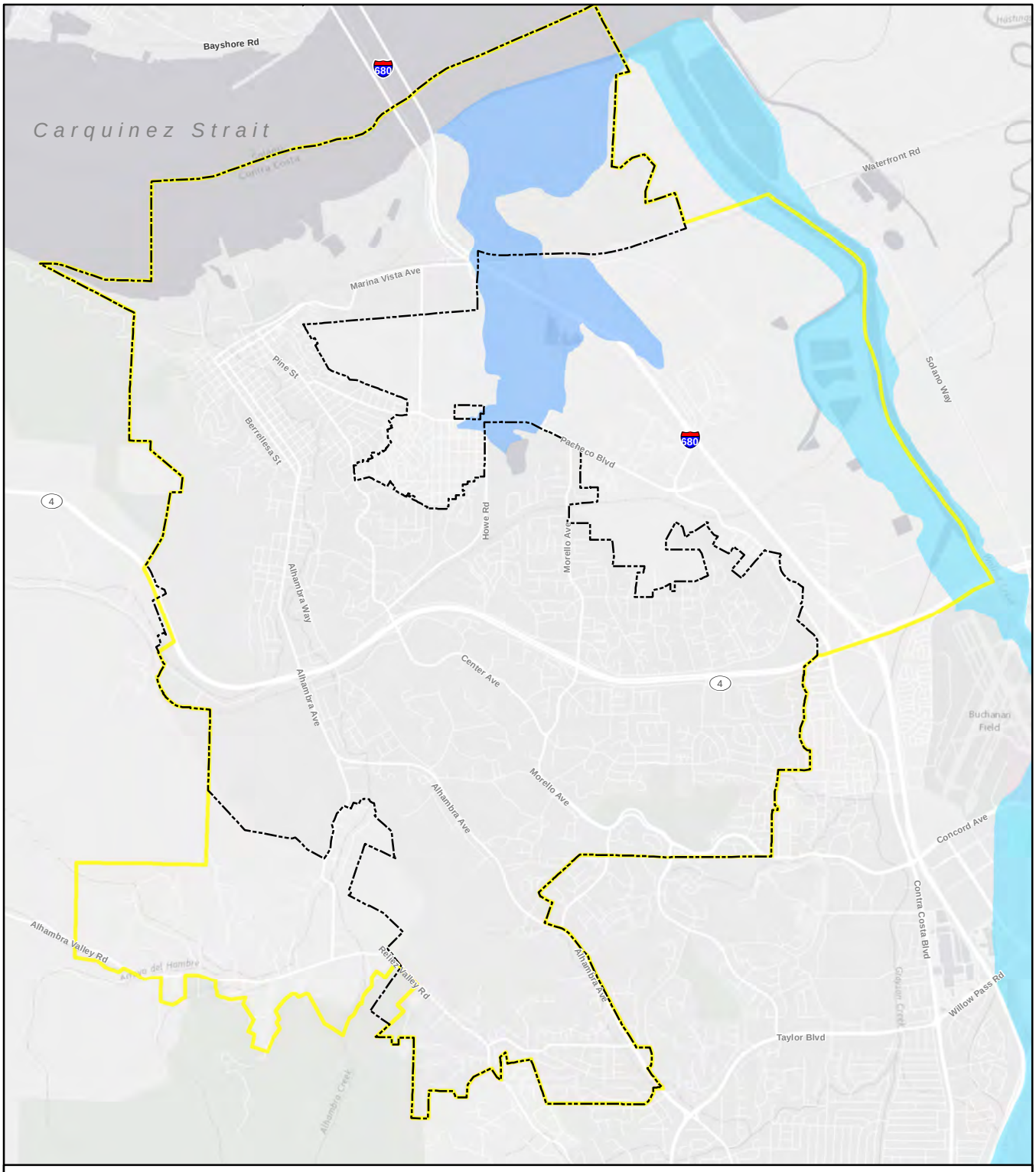

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.9-4: Dam Inundation

Legend

- City Limit
- Sphere of Influence
- Lafayette Dam Inundation Zone
- Martinez Dam Inundation Zone

N

0 ½ 1

Miles

Data sources: City of Martinez GIS; Cal EMA Dam Inundation CD. April 2009; ArcGIS Online Basemap Service.Map date: November 22, 2014. (MartinezGPEIR_Dams_Fig3-8-4_141122)

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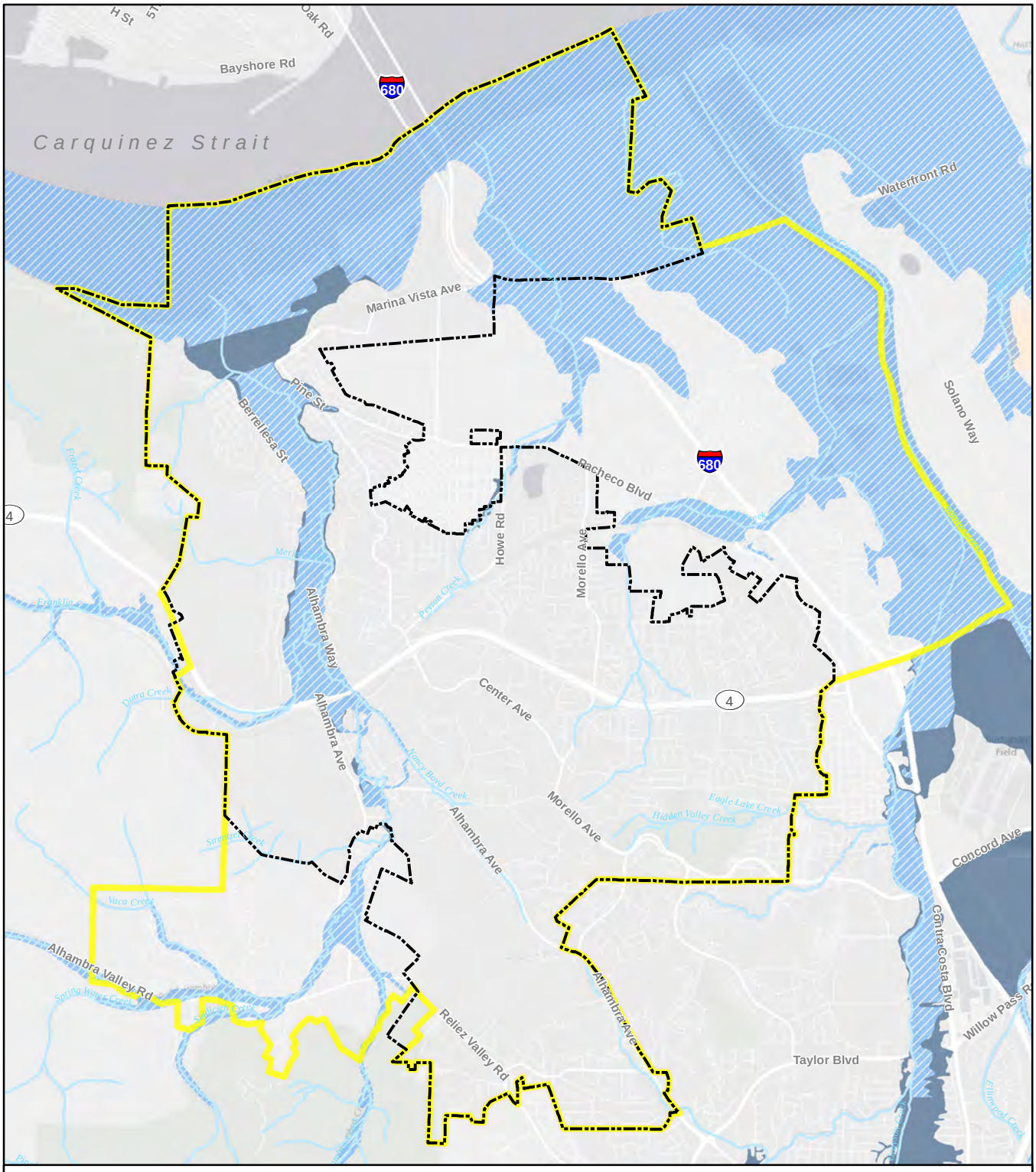

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.9-5: Flood Hazards

FEMA Flood Zone Designation

- 100-yr Flood Zone
- 500-yr Flood Zone

Planning Areas

- City Limit
- Sphere of Influence

N

0 ½ 1

Miles

Data sources: City of Martinez GIS; ESRI's StreetMap North America; FEMA Map Service Center; ArcGIS Online Aerial Image Service. Map date: November 22, 2014. (MartinezGPEIR_FEMA_Fig3-8-5_141123)

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The purpose of this EIR section is to address at a programmatic level the consistency of the General Plan Update with applicable local land use and planning regulations and policies, and to identify if the General Plan Update would impact the City by inducing substantial population growth. This section identifies the existing land use conditions, analyzes the project's consistency with relevant planning documents and policies adopted for the purpose of avoiding or mitigating an environmental effect, and recommends mitigation measures to avoid or minimize the significance of potential environmental impacts. General Plan policies associated with other specific environmental topics (aesthetics, air quality, biological resources, cultural resources, geology/soils, greenhouse gas, hazards, hydrology/water quality, noise, public services, recreation, transportation, and utilities) are discussed in the relevant sections of this EIR.

The primary information in this section is based on information provided by the following reference materials: *Plan Bay Area* (ABAG 2013); U.S Census 2000 and 2010 Population and Housing Estimates for Cities, Counties, and the State; the *Housing Element (*City of Martinez 2015); *Zoning* – Title 22 of the Martinez Municipal Code; the *Downtown Specific Plan* (City of Martinez 2005); the *Alhambra Valley Specific Plan Annexation* (City of Martinez 2012 and Contra Costa County 1992); and the Department of Finance E-5 Population and Housing report 2010 and 2014.

3.10.1 ENVIRONMENTAL SETTING

EXISTING CONDITIONS

Martinez is a city of approximately 37,000 residents located in the north central section of Contra Costa County. Martinez was founded in 1849 and incorporated in 1876. The City grew through transformation from reliance on the gold trade during the mid-1800s, and subsequently through the evolution of the wine and water related industries, and development of government and manufacturing centers, and related growth. The growth of Contra Costa County government, the City's location on the Carquinez Strait, and the presence of oil refineries have influenced Martinez's development history.[1]

There are three key boundary lines addressed by the General Plan, which make up the study area for the General Plan EIR. These include the City limits, the Sphere of Influence (SOI), and the Urban Limit Line (ULL), as shown on Figure 3.10-1 and described below.

> **City Limits:** Includes the area within the City's corporate boundary, over which the City exercises land use authority and provides public services.
>
> **Sphere of Influence (SOI):** The probable physical boundary and service area of the City, as adopted by the Local Agency Formation Commission (LAFCO). The SOI includes both incorporated and unincorporated areas. Lands within the SOI but outside existing City limits may be considered for development after annexation. Until that time, the area

[1] Martinez Adopted Housing Element (May 20, 2015)

within the SOI is under the jurisdiction of Contra Costa County and its General Plan; however, City policies will influence the County's considerations of development proposals for lands within the SOI.

Urban Limit Line (ULL): A countywide growth management tool used to ensure that each jurisdiction in the county regulates the geographic extent of urban growth and has a plan for future transportation improvements and urban services. The establishment of an urban limit line is a requirement of Measure J, which took effect on April 1, 2009. Compliance with Measure J is necessary for local jurisdictions to continue receiving their share of Local Transportation Maintenance and Improvement funds generated by the Measure J transportation sales tax, and to be eligible for Contra Costa Transportation for Livable Communities funds.

Land Use Patterns

When discussing land use, it is important to distinguish between planned land uses and existing land uses. The General Plan land use designations identify the long-term planned use of land but do not present a complete picture of existing land uses. The Contra Costa County Assessor's office maintains a database of existing land uses on individual parcels, including the number of dwelling units and related improvements such as non-residential building square footage. This information is used as the basis for property tax assessments and is summarized in Table 3.10-1. Existing land uses refers to the existing built environment, which may be different from the land use or zoning designations applied to land in the City for planning purposes. Figure 3.10-2 displays assessed land uses within the Planning Area.

TABLE 3.10-1 EXISTING LAND USES

USE DESCRIPTION	CITY	% OF CITY	SOI	% OF SOI	TOTAL	% OF TOTAL
Commercial	182.4	2.66%	79.3	2.06%	261.7	2.44%
Commercial - Vacant	25.6	0.37%	6.6	0.17%	32.3	0.30%
Industrial	724.0	10.56%	1,041.2	26.98%	1,765.3	16.48%
Industrial - Vacant	46.6	0.68%	272.5	7.06%	319.0	2.98%
Institutional	306.8	4.47%	20.5	0.53%	327.4	3.06%
Institutional - Government-Owned	1,974.0	28.79%	730.9	18.94%	2,705.0	25.25%
Land	601.7	8.78%	461.0	11.95%	1,062.6	9.92%
Miscellaneous	295.0	4.30%	235.0	6.09%	530.0	4.95%
Multiple	161.6	2.36%	20.3	0.53%	181.9	1.70%
Multiple - Vacant	5.1	0.07%	1.8	0.05%	6.9	0.06%
No Use Code (???)	113.1	1.65%	98.1	2.54%	211.2	1.97%
Residential	2,237.2	32.63%	794.6	20.59%	3,031.8	28.30%
Residential - Vacant	140.9	2.06%	89.0	2.31%	229.9	2.15%
Residential - Vacant - Unbuildable	42.2	0.62%	7.8	0.20%	50.0	0.47%
Total	**6,856.2**		**3,858.7**		**10,714.9**	

SOURCE: CONTRA COSTA COUNTY ASSESSOR'S OFFICE DATA, CITY OF MARTINEZ GIS, 2013

Current General Plan Land Use Designations

Land use designations adopted under the City's existing General Plan are shown in the current General Plan Land Use Map in Figure 3.10-3. The adopted Land Use Map is a collection of maps that correspond to the original General Plan Land Use Map and four Specific Area Plans that were adopted as part of the General Plan (Central Martinez, Alhambra Hills, Hidden Lakes, and John Muir). Since 1973, the General Plan and its associated Land Use Maps have been amended numerous times as part of the Downtown Alhambra Valley Specific Plans.

THE PROPOSED GENERAL PLAN

General Plan Land Use Designations

The Land Use Element of the General Plan Update defines various land use designations by their allowable uses, maximum development densities, and maximum floor area ratios. The following describes the proposed land use designations for the General Plan. Table 3.10-2 displays the acreages in the City limits and SOI for land use categories under the proposed General Plan and Land Use Map, and is depicted in Figure 2-2.

TABLE 3.10-2: GENERAL PLAN LAND USE DESIGNATIONS

Land Use Designation	*City*	*Sphere of Influence*	*Total*
Agricultural Lands	0	135.8	135.8
Alhambra Valley Agricultural Lands	132.1	281.2	413.3
Alhambra Valley Estate Residential - Low	0	162.2	162.2
Alhambra Valley Estate Residential - Very Low	126.4	79.4	205.8
Alhambra Valley Open Space	61.2	93.3	154.5
Neighborhood Commercial	52.0	7.2	59.2
Office and Business Park Commercial	51.8	0	51.8
Regional Commercial	21.6	0	21.6
Central Residential High	8.2	0	8.2
Central Residential Low - A	115.4	0	115.4
Central Residential Low - B	82.3	0	82.3
Central Residential Low - C	108.5	0	108.5
Central Residential Medium	17.8	0	17.8
Light Industrial and Service Commercial	70.2	97.4	167.6
Commercial & Multi-family Residential Combined Use Corridor	56.3	35.3	91.6
Medical Center Combined Use Corridor	8.8	0	8.8
Downtown Core	19.7	0	19.7
Downtown Government	30.3	0	30.3
Downtown Shoreline	18.0	0	18
Downtown Transition	16.6	0	16.6
Elementary School	28.7	9.1	37.8
Public Institution	141.3	448.6	589.9
Hospital	72.0	0	72.0
Residential High	90.8	10.2	101.0
Hillside Rural Residential	295.7	55.2	350.9
High School	17.1	0	17.1

Industrial and Manufacturing	595.6	1,296.5	1,892.1
Junior High School	12.7	0	12.7
Residential Medium	49.2	0	49.2
Residential Medium Low	368.3	51.7	420.0
Ocean	686.0	0	686.0
Open Space/Alhambra Hills Specific Plan	456.0	34.9	490.9
Open Space Preservation	1,920.8[1]	445.2	2,365.9
Parks and Recreation	194.1	0	194.1
Private School	2.0	0	2
Residential Low	1,215.7[1]	361.5	1,577.2
Right of Way	27.5	1.3	28.8
Rural Residential	0	0	0
Residential Very Low	485.5	12.2	497.7
Grand Total	**7,656.2**	**3,618.2**	**11,274.4**

NOTE:
[1] THERE IS A 99-LOT SUBDIVISION (VINE HILL SUBDIVISION) ON 25.9 ACRES THAT WAS APPROVED BY CITY COUNCIL, BUT IS CURRENTLY UNDER REFERENDUM. THE VINE HILL SUBDIVISION HAD PROPOSED TO CHANGE THE LAND USE DESIGNATION FROM OPEN SPACE PRESERVATION TO RESIDENTIAL LOW BEFORE IT WAS PLACED UNDER REFERENDUM. THE TABLE ABOVE REFLECTS THE 25.9 ACRES VINE HILL SUBDIVISION SITE UNDER THE OPEN SPACE PRESERVATION DESIGNATION. IF THE REFERENDUM WAS NOT PASSED, THE RESIDENTIAL LOW ACREAGE WITHIN THE CITY LIMITS WOULD INCREASE BY 25.9 ACRES AND THE OPEN SPACE PRESERVATION DESIGNATION WOULD DECREASE BY 25.9 ACRES.

SOURCE: CITY OF MARTINEZ, 2014; PSOMAS, 2014

As shown in Table 3.10-2, land uses having the greatest breadth within the City and SOI include open space preservation land uses (2,340.1 acres), industrial and manufacturing land uses (1,892.1 acres), and low density residential land uses (1,602.8 acres). Below is a description of land use designations included in the proposed General Plan, and includes relevant development standards for each use designation.

Downtown Core (D/C) - This designation is intended for the mixed use areas at the center of downtown, with an emphasis on a pedestrian scale mixture of residential, specialty commercial, tourist, restaurants, cultural and civic uses. Promoting the mix of residential and commercial uses where ground floor commercial uses are enhanced with residential uses above creating a vibrant commercial core. In addition to rehabilitation and adaptive reuse of historic buildings, development in this area emphasizes new and infill construction that is compatible with the historic structures that give Downtown its unique identity.

Residential Development Density: From 29 to 43 dwelling units per acre

Non-Residential and Mixed Use Floor Area Ratio: Up to 2.0. Floor Area Ratio up to 4.0 in the six-block area of maximum opportunity north of the railroad tracks and bounded by Ferry Street to the northeast, Escobar to the south and Alhambra Avenue to the Northwest.

Applicable Zoning Districts: CC (Central Commercial District)

Downtown Government (D/G) - This designation is intended for the area of existing Federal, State, and County facilities centered at Court and Pine Streets at Main Street, as well as the Intermodal Transit Station at Marina Vista. The core of this Designation is the County and State Court Campus, and the intent of this designation is to provide a center for the existing functions and future expansion of the Contra Costa County government, including administrative, judicial and correctional facilities and for federal, state and local civic facilities.

Floor Area Ratio: Up to 3.0 (non-residential)

Applicable Zoning Districts: C (Civic District); CC (Central Commercial District)

Downtown Shoreline (D/S)- This designation is intended to guide the transformation of a primarily industrial and service commercial area in the northwesterly portion of Downtown into a predominantly residential neighborhood, with the potential for waterfront oriented commercial uses (such as restaurants and hotels) and limited neighborhood serving commercial uses. Industrial uses are no longer consistent with this designation, but may remain as set forth in the City's non-conforming use ordinance.

Residential Development Density: From 18 to 30 dwelling units per acre

Non-Residential and Mixed Use Floor Area Ratio: Up to 2.0

Applicable Zoning District: DS (Downtown Shoreline District)

Downtown Transition (D/T) - This designation is intended maintain the character of this traditionally mixed use area immediately south of the areas designated Downtown Core and Downtown Government, and north of the residential neighborhoods beyond. This area will continue to contain small scale and locally serving service commercial uses, as well as office and residential uses. New development is envisioned to be primary multi-family residential.

Residential Development Density: From 19 to 29 dwelling units per acre

Non-Residential Floor Area Ratio: Up to 1.5

Applicable Zoning Districts: C (Civic District); CC (Central Commercial District); NC (Neighborhood Commercial District); PA (Professional and Administrative Office District); R-1.5 (Multi-family Residential District: 1,500 square feet site area per dwelling unit); DO/R-2.5 (Downtown Overlay District/Multi-Family Residential District: 2,500 square feet site area per dwelling unit & 1,500 square feet site area per dwelling unit; DO/R-3.5 (Downtown Overlay District/Family Residential District: 3.5 square feet site area per dwelling unit; 2,500 square feet site area per dwelling unit

DO/R-1.5 (Downtown Overlay District/Multi-Family Residential District: 1,500 square feet site area per dwelling unit & 1,250 square feet site area per dwelling unit w/ Use Permit approval).

Rural Residential (RR) - This designation identifies hillside private lands. These areas may include single-family lots, hobby farms, estates and open space. These areas often have steep terrain, environmental constraints and natural topographical features that preclude higher densities. Rural residential may include existing single family residential subdivisions, clustered development with common open space and other planned developments. The intent of the rural residential designation is to preserve the character of existing neighborhoods and achieve compatible new residential development while conserving natural resources.

In addition to the objectives of the Rural Residential Lands designation above, development density within the Franklin Hills shall not exceed: a) one unit per half-acre of land under 30% slope and under 350 feet elevation, and b) one unit per ten acres over 350 feet elevation.

Residential Development Density: From 0 to .49 dwelling unit per acre except as limited in the Franklin Hills or otherwise limited by the Hillside Development Regulations of the MMC.

Applicable Zoning Districts: R– Single Family Residential Districts ECD-R- (R- Residential Districts with Environmental Conservation Companion District.)

Residential Very Low (RVL) - This designation is typified by the rural residential neighborhoods that were developed under the County's jurisdiction, such as Muir Oaks and Franklin Canyon. Development within these areas is limited to single-family homes and related accessory uses that have low intensity characteristics.

Residential Development Density: From 0 to 1 dwelling unit per acre.

Applicable Zoning Districts: R-40 (One-family Residential District: 40,000 square feet site area per dwelling unit); R-80 (One-family Residential District: 80,000 square feet site area per dwelling unit); R-100 (One-family Residential District: 100,000 square feet site area per dwelling unit); RR (Rural Residential Districts); ECD-R- & ECD RR (R- Residential Districts and Rural Residential Districts with Environmental Conservation Companion District).

Residential Low (RL) - This designation includes both rural residential neighborhoods developed under the County's jurisdiction, as well as neighborhoods of custom and semi custom single-family homes, on relatively larger lots, that are suited to the hills of southern Martinez. Development within these areas is limited to single-family homes and related accessory uses that have low intensity characteristics.

Residential Development Density: From 1-5 dwelling units per acre.

Applicable Zoning Districts: R-10 (One-family Residential District: 10,000 square feet site area per dwelling unit); R-20 (One-family Residential District: 20,000 square feet site area per dwelling unit); RR (Rural Residential Districts).

Residential Lower/Medium (RLM) - This designation is the single most predominant land use within the City's jurisdiction, and allows single family homes, on subdivision lots typically ranging from 5,000 square feet to 7,500+ square feet. Paired and multi-family housing units may be possible as part of a Planned Unit Development with common open space areas. Very limited nonresidential uses are supported within this designation, subject to the applicable zoning regulations.

Residential Development Density: From 5 to 10 dwelling units per acre.

FAR: Non Residential up to .4

Applicable Zoning Districts: R-6 (One-family Residential District: 6,000 square feet R.7 (One-family Residential District: 7,000 square feet site area per dwelling unit);site area per dwelling unit); R-7.5 (One-family Residential District: 7,500 square feet site area per dwelling unit).

Residential Medium (RMD) - This designation allows for "small lot/cluster" single-family residential within Planned Unit Developments, & townhomes and other multi-family housing. Very limited non residential uses are supported within this designation, subject to the applicable zoning regulations.

Residential Development Density: From 10 to 20 dwelling units per acre.

FAR: Non Residential up to .4

Applicable Zoning Districts: R-3.5 (Family Residential District: 3,500 square feet site area per dwelling unit & minimum 4,000 square feet lot size).

Residential High (RHD) 20-30 dwelling units per acre - This designation allows for townhomes and other multi-family housing, such as apartments and condominiums units, typically as "flats" in single or multi-level buildings. Very limited non-residential uses are supported within this designation, subject to the applicable zoning regulations.

Residential Development Density: From 20-30 dwelling units per acre.

FAR: Non Residential up to .4

Applicable Zoning Districts: R-1.5 (Multi-Family Residential District: 1,500 square feet site area per dwelling unit, R-2.5 (Multi-Family Residential District: 2,500 square feet site area per dwelling unit & minimum 3,500 square feet lot size).

Central Residential Low-A (CRL-A) - This designation is intended to continue the established character of this portion of *the Central Residential* area's pre-WWII hillside residential areas, where streets are generally steep and winding, and home placement was largely dictated by the steep topography. New development is limited to new single family dwellings on the few remaining vacant lots.

Residential Development Density: Up to 7 dwelling units per acre.

Applicable Zoning Districts: R-6.0 (One-family Residential District: 6,000 square feet site area per dwelling unit);

Central Residential Low-B (CRL-B) - The *Central Residential/Group B* designation is intended maintain the established single family character of *the Central Residential* area's outlying neighborhoods, where most all homes were built prior to WWII on 5,000 square foot lots from the original 1800'S survey for "The Town of Martinez", or subsequent pre-WWII subdivisions.

Residential Development Density: Up to 9 dwelling units per acre.

Applicable Zoning Districts: R-3.5(Family Residential District: 3500 Square feet site area per dwelling unit & minimum 4,000 square feet)

Central Residential Low-C (CRL-C) - This designation is the largest in area of the three Central Residential Mixed Single- and Multi- Family designations, and most typifies the traditional pattern of development in the area, with single family homes on the 5,000 square foot interior lots and either duplexes or individual "split lots" (2,500 sq. ft. each) at the 5,000 square foot corner lots. This designation encourages the continuation of adding new contextually appropriate single family and duplex in-fill housing.

Residential Development Density: Up to 17 dwelling units per acre.

Applicable Zoning Districts: R-2.5 (Multi-family Residential District: 2,500 square feet site area per dwelling unit); DO/R-3.5 (Downtown Overlay District/Family Residential District: 3,500 square feet site area per dwelling unit; 2,500 square feet site area per dwelling unit.

Central Residential Medium (CRM- 0-29) - This designation denotes the residential areas closer to City Hall and the Downtown Core, and is the most eclectic of the Central Residential Mixed Single- and Multi- Family designations, in that single-family homes, duplexes and apartments buildings are interspersed throughout the area. While the retention and addition of new single-family homes is permitted, this designation encourages the construction of new duplexes and multi-family building on suitable sites.

Residential Development Density: Up to 29 dwelling units per acre.

Applicable Zoning Districts: R-1.5 (Multi-family Residential District: 1,500 square feet site area per dwelling unit); DO/R-2.5 (Downtown Overlay District/Multi-Family Residential District: 2,500 square feet site area per dwelling unit)

Central Residential High (CRH) - The Central Residential High designation includes the residential areas closest to the Downtown Core and is envisioned to have the highest density housing within the three Central Residential Mixed Single- and Multi- Family designations.

Residential Development Density: Up to 35 dwelling units per acre.

Applicable Zoning District: DO/R-1.5 (Downtown Overlay District/Multi-Family Residential District: 1,500 square feet site area per dwelling unit & 1,250 square feet site area per dwelling unit.

Alhambra Valley Estate Residential – Very Low Density (AV/ER-VL) - The primary land use envisioned in this designation is detached single-family homes on lots typically one acre or larger, with the keeping of a limited number of livestock, consistent with a rural or semi-rural lifestyle.

Residential Development Density: Up to 1 dwelling unit per acre

Applicable Zoning Districts: AV/R-40 (Alhambra Valley Residential Zoning District, Minimum lot size 40,000 square feet).

Alhambra Valley Estate Residential _ Low Density (AV/ER-L) - The primary land use envisioned in this designation is detached single-family homes on lots typically one-half acre or larger.

Residential Development Density: From 1 to 2 dwelling unit per acre)

Applicable Zoning Districts: AV/R-42 (Alhambra Valley Residential Zoning District, Minimum lot size 20,000 square feet). A-4 (Agricultural Preserve District).

Alhambra Valley Agricultural Lands (AV/AL) - This land use designation includes privately owned rural lands, generally in hilly areas that are used for grazing livestock or dry grain farming. The primary purposes of the Agricultural Lands designation is to: a) preserve and protect lands capable of and generally used for the production of food, fiber and plant materials; and b) provide opportunities for rural residential single family homes.

Residential Development Density: Maximum density equivalent to a minimum 5 acres per dwelling unit

Applicable Zoning Districts: AV/A-5 (Alhambra Valley Agricultural District, Minimum lot size 5 acres).

Neighborhood Commercial (C/N) - This designation is intended for retail and other services which meet the day-to-day needs of local residents. Uses include business usually found in convenience and neighborhood shopping centers.

Non-Residential Floor Area Ratio: Up to 0.5

Applicable Zoning Districts: RB – (Retail Business District ;) NC (Neighborhood Commercial District)

Service Commercial (C/S) - This designation is intended to provide sites for commercial businesses that are not appropriate in other areas because of high volumes of vehicle traffic and potential impacts on other uses. This designation allows small scale commercial uses that provide goods and services to employees, residents and visitors. It includes automotive sales and services, building materials, warehouses, distribution and personal storage located on major arterial streets as well as retail uses, services and small offices.

Non- Residential Floor Area Ratio: up to 0.8

Applicable Zoning District: SC (Service Commercial); LI (Light Industrial)

Regional Commercial (C/R) - This designation, being distinct from the Neighborhood Commercial designation, denotes areas with buildings and parking lots of larger scale, intended to serve businesses with a regional focus. The Land Use Map Identifies the two clusters of regionally serving retail along the John Muir Parkway.

Non-Residential Floor Area Ratio: Up to 1.0

Applicable Zoning Districts: CC (Central Commercial District); CR (Commercial Recreation District)

Mixed Use Commercial (CMU) - This designation allows for a mix of commercial, office, multifamily and mixed-use development. This designation is intended to maintain and enhance areas with indoor non-retail commercial activity, primarily containing office, research & development and light manufacturing uses without any significant outdoor storage. Settings range from single-purpose office developments to well landscaped business parks with a variety of indoor uses. Assembly and small restaurants to serve complex employees may also be accommodated, subject to the applicable zoning regulations.

Residential Development Density: up to 30 units per acre

Non-Residential Floor Area Ratio: Up to .1.0

Applicable Zoning District: CC (Central Commercial District); SC (Service Commercial District); PA (Professional and Administrative Office District); R & D (Research and Development District). CI (Controlled Industrial District); R1.5 (Multi Family Residential District, 1,500 square feet per dwelling unit); R-3.5 (Multi Family Residential District; 3,500 square feet per dwelling unit.

Medical Center – Mixed Use (MCMU) - The Medical Center Mixed Use designation is defined as the area along Alhambra Avenue (between Bertola and F Streets), and along C Street, where office uses have historically intermingled among the original low and medium density residential units in the area. The presence of the Contra Costa County Medical Center and Alhambra High School on

Alhambra Avenue promote the development of additional office uses, with the retention and addition of residential uses also being permitted.

Residential Development Density: Up to 9 dwelling units per acre.

Non-Residential and Mixed-Use Floor Area Ratio: Up to 1.0

Applicable Zoning Districts: PA (Professional and Administrative Office District) R-3.5 (Family Residential District: 3.5 square feet site area per dwelling unit – 4,000 minimum lot size); R-6 (One-family Residential District: 6,000 square feet site area per dwelling unit.

Commercial & Multi-Family Residential Combined Use Corridor (CUC/C+R30) - This area includes corridors along arterials and John Muir Parkway frontage roads, suitable for a variety of higher intensity uses, such as multi-family residential, office and commercial. The City's two aging commercial strips (Alhambra Avenue, between F Street and Highway 4; and Pacheco Boulevard, between Palm Avenue and Interstate 680) and several vacant parcels adjacent to the John Muir Parkway frontage roads are within this designation. The Commercial and & Multi-family Residential Combined Use Corridor Designation is intended to allow both new and existing non-residential and residential uses.

Residential Development Density: From 19 to 30 dwelling unit per acre.

Non-Residential and Mixed-Use Floor Area Ratio: Up to 2.0

Applicable Zoning Districts: C (General Commercial District); TC (Thoroughfare Commercial District; NC (Neighborhood Commercial District); PA (Professional and Administrative Office District); R-1.5 (Multi-Family Residential District: 1,500 square feet site area per dwelling unit, 1.250 square feet site area per dwelling unit with Planning Commission approval & minimum 10,000 square feet lot size)

Industrial and Manufacturing (IM) - This designation allows primary manufacturing, refining, and similar heavy industrial uses. This designation also supports activities involving refining, storing and transporting petroleum products. Ancillary office uses as well as other manufacturing and warehouse maybe permitted, subject to the applicable Zoning Regulations. No retail uses are allowed.

Non-Residential Floor Area Ratio: Up to 0.40

Applicable Zoning Districts: H-I (Heavy Industrial Districts); ECD-H-1 (H -1 Heavy Industrial District with Environmental Conservation Companion District.).

Parks and Recreation (P&R) - Designation denoting public park areas and existing and planned active recreation facilities including relatively larger private homeowners' associations' community facilities.

Non-Residential Floor Area Ratio: Up to 0.5

Applicable Zoning District: RF (Recreation Facility District.).

Open Space Preservation (OS/P) - Designation for public and private lands preserved as a scenic or environmental resource, either by public or common interest ownership, or through dedication of scenic open space or other easements or through conditions of development approval or previous designation and zoning action. While alteration of such properties for active recreation is typically

not envisioned, naturalistic and agricultural plantings, and trails, may be possible if consistent with the intent of preserving the intended scenic resource and as may be permitted by any easements.

Non-Residential Floor Area Ratio: Up to 0.1

Applicable Zoning Districts: OS (Open Space District); All R – and RR- (Residential and Rural Residential Districts, with use restrictions as prescribed by applicable scenic easements and/or final subdivision map dedications).

Alhambra Valley Open Space (AV/OS) - This designation includes publicly owned open space lands and includes, without limitation, areas of significant ecological resources or geologic hazards that are unique to the Alhambra Valley community. The Alhambra Valley Open Space designation also includes privately owned properties for which future development rights have been deeded to a public or private agency or which have been previously designated as open space. For example, significant open space areas within planned developments identified as being owned and maintained by a homeowners association fall under this designation. Also included are the steep, unbuildable portions of approved subdivisions which may be deeded to agencies such as the East Bay Regional Park District but which have not been developed as park facilities.

Non-Residential Floor Area Ratio: Up to 0.1

Applicable Zoning Districts: AV/PD (Alhambra Valley Planned Development District; OS (Open Space District)

Agricultural Lands (AG) - The Agricultural Lands designation is specific to areas currently used for agricultural production (specifically the Viano Vineyards located east of Morello Avenue and south of the Burlington Northern @ Santa Fe (BNSF) railroad tracks near Marie Avenue). While similar to the Open Space categories in that Agricultural Lands have scenic value, structures for agricultural production and residential use are permitted and integral to the desirable preservation of viable agricultural uses.

Non-Residential Floor Area Ratio: Up to 0.2

Residential Development Density: 20 acres per unit

Applicable Zoning Districts: A-4 (Agricultural Preserve District).

Marina and Waterfront (Parks and Recreation) -The marina and waterfront area are comprised of the Marina and launch ramp, dry storage areas south of Marina, and other uses historically established for supporting commercial and social organization's facilities. The marina may also contain marina support services such as restaurants, and commercial boating and fishing activities. Other non-water related community serving recreation facilities are located between the Marina and Downtown, such as the John Muir Amphitheatre, waterfront park, ball fields, bocce courts, skate park, and the EBRPD equestrian facilities.

Non-Residential Floor Area Ratio: Up to 1.0

Applicable Zoning Districts: RF (Recreational Facilities)

3.10.2 REGULATORY SETTING

STATE

California General Plan Law

Government Code Section 65300 requires that each county and city adopt a General Plan "for the physical development of the city, and any land outside its boundaries which bears relation to its planning."

The General Plan consists of a statement of development policies and includes a diagram or diagrams and text setting forth objectives, principles standards, and plan proposals. It is a comprehensive long-term plan for the physical development of the county or city and is considered a "blueprint" for development. The General Plan must contain seven state-mandated elements: Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety. It may also contain any other elements that the City wishes to include. The land use element designates the general location and intensity of designated land uses to accommodate housing, business, industry, open space, education, public buildings and grounds, recreation areas, and other land uses.

State law (Government Code Section 65580 et seq.) requires cities and counties to update the housing element of their General Plan every eight years. The Housing Element is intended to regulate available housing supply through planning and zoning. State law mandates that local governments adequately plan to meet existing and projected housing needs of the community. The law acknowledges that, in order for the private market to adequately address housing needs, local governments must adopt land use plans and regulatory systems that provide opportunities for housing development. The State law requires the Department of Housing and Community Development (HCD) review local housing elements for compliance with the law. The City of Martinez updated its Housing Element in 2015. The Housing Element was certified by HCD.

The 2003 General Plan Guidelines, established by the Governor's Office of Planning and Research (OPR) to assist local agencies in the preparation of their general plans, further describe the mandatory land use element as a guide to planners, the general public, and decision makers prescribing the ultimate pattern of development for the county or city.

Transportation 2035 Plan

The *Transportation 2035 Plan* (MTC 2009) is the most recently adopted Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) for the San Francisco Bay Area region. The *Transportation 2035 Plan* specifies how some $218 billion in anticipated Federal, State, and local transportation funds will be spent in the nine-county Bay Area during the next 25 years. Consistency with applicable air quality plans is demonstrated through the *Transportation Air Quality Conformity Analysis for the Transportation 2035 Plan* (MTC 2009), which was prepared using population forecasts for each local jurisdiction as inputs into the regional travel demand model.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was developed to protect the quality of the environment and the health and safety of persons from adverse environmental effects. Discretionary projects are required to be reviewed consistent with the requirements of CEQA to determine if there is potential for the project to cause a significant adverse effect on the environment. Depending on the type of project and its potential effects, technical traffic, noise, air quality, biological resources, and geotechnical reports may be needed. If potential adverse effects can be mitigated, a mitigated negative declaration is required. If potentially adverse effects cannot be mitigated, an environmental impact report is required. These documents have mandated content requirements and public review times. Preparation of CEQA documents can be costly and, despite maximum time limits set forth in the Public Resources Code, can extend the processing time of a project by a year or longer.

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) was prepared by the San Francisco Bay Conservation and Development Commission (BCDC). The Bay Plan guides BCDC's planning and actions for the area within its jurisdiction. The Bay Plan includes two primary parts: the policies to guide future uses of the Bay and shoreline, and the maps that apply these policies to the present Bay and shoreline.

The Bay Plan, covers the following matters:

- The results of BCDC's detailed study of the Bay;
- The comprehensive plan adopted by BCDC for the conservation of the water of San Francisco Bay and the development of its shoreline;
- BCDC's recommendation of the appropriate agency to maintain and carry out the Bay Plan;
- BCDC's estimate of the approximate amount of money that would be required to maintain and carry out the provisions of the Plan for the Bay; and
- Other information and recommendations the BCDC deemed desirable.

The California Legislature received and acted upon the Bay Plan in 1969. The revised McAteer-Petris Act adopted by the Legislature and signed into law by the Governor designated the BCDC as the agency responsible for maintaining and carrying out the provisions of the law and the Bay Plan for the maintenance and protection of San Francisco Bay. BCDC is the federally designated state coastal management agency for the San Francisco Bay segment of the California coastal zone. This designation empowers BCDC to use the authority of the federal Coastal Zone Management Act to ensure that federal projects and activities are consistent with the policies of the Bay Plan and state law.

BCDC may amend the Bay Plan from time to time so long as the changes are consistent with the findings and declarations of policy in the law. Consistent with that provision, BCDC has adopted a number of amendments to the Bay Plan policies and maps and such amendments to date have been incorporated in the Bay Plan.

BCDC has jurisdiction within the proposed project of areas that are within 100 feet of the shoreline. The provisions of the Bay Plan pertaining to areas outside of the 100-foot shoreline band are advisory. The Martinez Planning Area is located within the area addressed by Plan Map 2. Plan Map 2, Policy 14 refers to the area as Martinez Regional Shoreline and Martinez Waterfront Park and provides for the following: preservation of a mix of recreational uses for picnicking, wildlife viewing, wildlife habitat management and hiking in regional park and community facilities, including team sports in City park; possible ferry terminal; allow [uses] if compatible with park and marina use; serve with bus public transit to reduce traffic and parking needs; complete Bay Trail and provide non-motorized small boat landing and launching. Plan Map 2 designates the area along the Martinez Regional Shoreline as Waterfront Park/Beach, Tidal Marsh, and Water Related Industry.

Permit requirements are detailed in Title 7.2 of the California Government Code and Title 14, Division 5 of the California Code of Regulations. BCDC has the authority to approve projects with conditions that must be carried out as a part of the authorized project. According to BCDC's website, typical permit conditions include requirements to construct, guarantee, and maintain public access to the Bay, plan review requirements that must be met before construction can begin, and mitigation requirements to offset the adverse environmental impacts of proposed projects.

LOCAL

City of Martinez General Plan

The adopted City of Martinez General Plan establishes land use goals and policies in the Land Use Element. The City adopted its most recent Housing Element January 19, 2011 and updated the Housing Element in 2015. Land uses in Martinez have been developed based on the Land Use Map, goals, and policies established by the adopted General Plan (see Figure 3.10-3).

City of Martinez Zoning Ordinance

Title 22 of the Martinez Municipal Code is the City's Zoning Ordinance. The Zoning Ordinance carries out the policies of the General Plan by classifying and regulating the uses of land and structures within the City, consistent with the General Plan. The Zoning Ordinance is adopted to protect and promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents, and businesses in the City. More specifically, the purpose of the Zoning Ordinance is to achieve the following objectives:

A. To implement the objectives of the General Plan in all its elements, through the provision of a precise plan consistent with the General Plan, to guide, control and regulate the maintenance, change, growth and development of the City;
B. To foster a harmonious, convenient, workable relationship among land uses;
C. To promote the stability of existing land uses which conform to the General Plan and to protect them from inharmonious influences and harmful intrusions;
D. To ensure that public and private lands ultimately are used for the purposes which are most appropriate and beneficial from the standpoint of the City as a whole;
E. To prevent excessive population densities and overcrowding of the land with structures;
F. To foster the provision of adequate off-street parking and loading facilities;

G. To facilitate the appropriate location of community facilities and institutions;
H. To preserve the natural beauty of the City.

Chapter 22.10 of the Zoning Ordinance includes the City's Zoning Map and District Boundaries and provides direction for the interpretation of the Zoning Map. Chapters22.12 through 22.30 define allowable land uses within each zoning district, provide development standards for each zoning district and, where applicable, provide performance standards and identify design criteria. Chapters 22.32 through 22.57 establish supplementary regulations, including those for landscaping, signage, recycling facilities, hillside development, agricultural preservation, water conservation, and Planned Unit Developments (among others).

Downtown Specific Plan

The Downtown Specific Plan includes the Downtown area, the industrial area to the west of Downtown, parcels north of Downtown across the railroad tracks, and the sloping residential area to the east. The area comprises approximately 220 acres. Build out of the Downtown Specific Plan is anticipated to result in the development of approximately 1,000 new dwelling units and a small amount of new commercial office space.

The purpose of the Downtown Specific Plan is to guide public and private investment to ensure that future development and infrastructure projects help realize the Martinez community's goals and visions for the future of Downtown. The principal goals of the Downtown Specific Plan include:

1. To enhance the quality of life for Martinez residents, and
2. To bring back commercial dynamism to the downtown business area.

The Specific Plan is intended to protect and perpetuate the small-town character and quality of life of downtown Martinez; revitalize its economy by strengthening the downtown business district as a shopping and dining destination for Martinez residents and visitors; capitalize on past investments such as the waterfront, Alhambra Creek, and Intermodal Station; create new housing opportunities for a variety of household types; and preserve and enhance Downtown's historic small-town character. Further, the Specific Plan is intended to promote "smart growth" and "sustainable development" in Downtown Martinez, by:

1. Providing for compact, pedestrian-oriented development.
2. Providing for denser housing within walking distance of transportation centers.
3. Taking advantage of existing infrastructure.
4. Providing for mixed land uses.
5. Requiring attractive, distinctive design for new development.

Local Agency Formation Commission of Contra Costa County

In 1963, the State Legislature created a local agency formation commission (LAFCO) for each county, with the authority to regulate local agency boundary changes. Subsequently, the State has expanded the authority of a LAFCO. The goals of a LAFCO include preserving agricultural and open space land resources and providing for efficient delivery of services. The Contra Costa LAFCO has authority over land use decisions in Contra Costa County affecting local agency boundaries. Its authority extends to the incorporated cities, including annexation of County lands into a City, and

special districts within the County. LAFCO has the authority to review and approve or disapprove the following:

- Annexations to or detachments from cities or districts.
- Formation or dissolution of districts.
- Incorporation or disincorporation of cities.
- Consolidation or reorganization of cities or districts.
- Extensions of service beyond an agency's jurisdictional boundaries.
- Development of, and amendments to, Spheres of Influence (SOI). The SOI is the probable physical boundary and service area of each local government agency. This may extend beyond the current service area of the agency.
- Provision of new or different services by districts.

In addition, LAFCO conducts Municipal Service Reviews (MSRs) for services within its jurisdiction. An MSR typically includes a review of existing municipal services provided by a local agency and its infrastructure needs and deficiencies. It also evaluates financing constraints and opportunities, management efficiencies, opportunities for rate restructuring and shared facilities, local accountability and governance, and other issues.

Measure J

Measure J, approved by Contra Costa County voters in November 2004, provides for the continuation of a half-cent transportation sales tax until 2034. The funds generated from the tax will be used for projects and programs as set forth in the voter-approved Expenditure Plan. Measure J requires each jurisdiction in Contra Costa County to comply with all of the following components of its Growth Management Program:

- Adopt a Growth Management Element;
- Adopt a Development Mitigation Program;
- Participate in a Cooperative, Multi-Jurisdictional Planning Process to Reduce Cumulative Regional Traffic Impacts of Development;
- Address Housing Options;
- Develop a Five-Year Capital Improvement Program;
- Adopt a Transportation Systems Management Ordinance or Resolution; and
- Adopt an Urban Limit Line. Cities that do not adopt a ULL default to the voter-approved Countywide ULL, adopted under Measure C in 1990. It is noted that the City adopted the ULL.

Contra Costa County Airport Land Use Compatibility Plan

On December 13, 2000, the Contra Costa County Airport Land Use Commission adopted the Airport Land Use Compatibility Plan (ALUCP), which sets forth the "referral area boundaries" around each airport in the County and the limits on land use, building height, and population density in those areas. The ALUCP regulates land use in three major areas: safety zones, noise zones, and height restrictions. It provides land use compatibility guidelines for lands near the

airport, to avert potential safety problems and to ensure unhampered airport operations. The ALUCP establishes three safety zones that are linked to land use compatibility: clear, approach/departure, and overflight.

Under California Government Code Section 65302.3(a), general plans must be consistent with any airport land use plan adopted pursuant to Public Utilities Code Section 21675. Buchanan Field Airport in Concord, CA is the closest airport to Martinez. Lands within the City limits and SOI, are located within the airport influence areas identified by ALUCP. [2]

The Buchanan Field Airport influence area is defined by the outer edge of the airport's Federal Aviation Regulations (FAR) Part 77 conical surface. This area extends 14,000 feet from the ends of the primary surfaces for Runways 1L-19R and 14L-32R, and includes lands within Martinez City limits and SOI. The airport influence area encompasses locations commonly overflown by aircraft as they approach and depart the airport or fly within the traffic pattern. Aircraft may overfly these locations at or below the established traffic pattern altitude (1,000 feet above the airport elevation for light aircraft; 1,500 feet for jets and other large aircraft). The primary criteria for assessing whether a land use plan, ordinance, or development proposal is to be judged compatible with Buchanan Field is the Countywide Compatibility Criteria; these include:

a. policies pertaining to the review of general plans (Countywide Policy 2.4.3);
b. consideration for special conditions (Countywide Policy 2.4.4); and
c. supplemental compatibility criteria (Countywide Policies, Section 4).

Noise contours are used as the basis for evaluating the aircraft-related noise levels to which nearby property is subjected. Acceptable noise levels for Single-Family Residential, duplex, and mobile home residential uses are considered normally acceptable at noise exposures up to 55 dB CNEL, and marginally acceptable at exposures between 55 and 65 dB CNEL. As a condition for approval of any new development within the 60-dB CNEL contour, a notice indicating that the property is subject to frequent aircraft noise intrusion shall be recorded with the deed. Noise contours within the SOI include the 55-60-dBCNELcontour. Within this zone, single family, as well as amphitheater uses are considered marginally acceptable, while uses such as public facilities, commercial and industrial, and agricultural and recreational uses are normally acceptable.

The boundaries of the Buchanan Field Airport Safety Zone that are within the SOI include Safety Zone 4. Within safety zone 4, land use intensity is not limited other than that buildings shall have no more than four habitable floors above ground, and aboveground storage of more than 2,000 gallons of fuel or other hazardous materials is prohibited in existing or planned residential or commercial areas.

Basic height limitations for protection of the airport's airspace limits the height of objects in the vicinity of Buchanan Field Airport are required. The basic limitations are set in accordance with FAR Part 77 surfaces and TERPS criteria, and no objects shall be permitted to exceed these height limits

[2] http://www.cccounty.us/DocumentCenter/View/856

unless the ALUC has either established a Height Exception Overlay Zone or granted a case-specific exception. Located within Martinez, Height Exception Overlay Zone 2 encompasses locations where the ground level penetrates the airspace surfaces defined by FAR Part 77. New structures or additions to existing structures proposed for construction within Height Exception Overlay Zone 2 are permitted to have a total height, including all appurtenances, up to 45 feet above ground level at the site. A Federal Aviation Administration aeronautical study is required of any proposed object taller than 45 feet above ground level in this zone. Exceptions to the preceding height limits may be granted on a case-by-case basis in accordance with Countywide Policy 4.3.2.

Contra Costa County General Plan

Contra Costa County adopted its General Plan on January 18, 2005. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth through the year 2020. The County's General Plan includes the following elements:

- Land Use
- Growth Management
- Circulation and Transportation
- Housing
- Public Facilities/Services
- Conservation
- Open Space
- Safety
- Noise

The County's General Plan establishes allowed land uses for lands within the City's SOI and Planning Area. While the City of Martinez General Plan Land Use Map identifies planned land uses within the SOI and Planning Area, Contra Costa County has ultimate land use planning and project approval authority within the SOI and Planning Area, unless the lands are annexed to the City. The County's land use designations for areas within the Sphere of Influence and unincorporated areas around the City are shown on Figure 3.10-4.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on land use and population if it will:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Potential conflicts with any applicable habitat conservation plan or natural community conservation plan are further discussed in Section 3.3 (Biological and Natural Resources).

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: General Plan implementation has the potential to physically divide an established community (Less than Significant)

The proposed General Plan establishes the City's vision for future growth and development. The land uses allowed under the proposed General Plan (Figure 2-2) provide opportunities for cohesive new growth at in-fill locations within existing urbanized areas of the city, as well as new growth adjacent to existing urbanized areas, but would not create a physical division with an existing community. New development and projects would be designed around existing communities and neighborhoods, and provide connectivity between existing development and new development. Industrial and manufacturing uses located east of Interstate-680 can expect substantial development over the planning period, however these uses are designated to exterior portions of the SOI and would not create divisions of existing communities. The proposed General Plan Land Use Map designates sites for a range of urban and rural developed uses as well as open space. Furthermore, the proposed General Plan does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities.

The General Plan Update includes a range of goals and policies to ensure that land uses and all future land development follows an orderly and cohesive pattern to ensure that land uses do not impact established communities. Goal LU-G-1 promotes a balanced land use pattern and mix of uses, which enhance community character and serve the needs of existing and future residents. Furthermore this goal encourages land use development to occur in an orderly fashion and in pace with the expansion of public facilities, while providing appropriate transitions between single family neighborhoods and higher intensity uses. This goal is supported by policy LU-P-1.1 that ensures the City maintains and implements the General Plan Land Use Map, which provides a description and location of land uses, and only permits development that is consistent with the General Plan. Goal LU-G-2 ensures the preservation and strengthening of the City's overall image, and assures development that enhances the existing character, while preserving natural resources, residential neighborhoods, commercial areas and the small town historic character of Downtown Martinez. This goal is supported by policy LU-P-2.3 that ensures the City acknowledges the unique historic character of the Central residential areas and modifies standards and zoning regulations to facilitate maintenance and upgrading of existing structures that are currently seen as nonconforming by conventional zoning standards. Goal LU-G 4-1 calls for the preservation of Historic Resources throughout the City of Martinez, and is supported by Policy LU-P 4.3, that protects the character of single-family residential neighborhoods through the preservation and improvement of their character-defining features. LU-P 2.1 and LU-P-2.2 promotes new infill development projects that are consistent with the City's land use map, compatible with surrounding existing use, and provide transit oriented opportunities. LU-P-4.3 encourages the gradual reuse of incompatible, ineffective, and/or undesirable land uses with uses consistent with the General Plan. LU-P-2.4 encourages multi-family residential developments to be visually and functionally integrated and consistent in scale, mass, and character when located within an

existing residential neighborhood.LU-P-8.1b supports new developments that are compatible with the surrounding environment in terms of form, scale and physical appearance. Additionally, policies in contained in the Parks, Community Facilities and Utilities Element provide many policies that improve alternative linkages between parks neighborhoods and services. Specifically, PCU-P-3.4 supports creating linkages in the planned trail system by incorporating easements or dedications of public right-of-way when possible to provide missing trail links when approving new development.

This Draft EIR addresses the potential impacts of development that may occur under the Martinez General Plan, including residential, commercial, office, industrial, public facilities and a range of other uses that are accommodated by the General Plan. Future development would be required to be consistent with the proposed General Plan, the General Plan Land Use Map, and State requirements. The implementation of the General Plan is intended to ensure that development in the Martinez Planning Area protects existing communities through a continued effort to ensure adequate, high quality housing, connectivity, and reduced land use conflicts throughout the Planning Area. The proposed General Plan would have a **less than significant** impact associated with the physical division of an established community.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Land Use Element

Goals

LU-G-1 *Promote a balanced land use pattern, a mix of which enhances community character and serves the needs of existing and future residents. Encourage land use development to occur in an orderly fashion and in pace with the expansion of public facilities. Provide appropriate transitions between single family neighborhoods and higher intensity uses.*

LU-G-2 *Preserve and strengthen the City's overall image and create development that enhances the existing character, preserves the natural resources, residential neighborhoods, commercial areas and small town historic character of Downtown Martinez to the maximum extent feasible.*

LU-G-4 *Preserve Historic Character throughout the City of Martinez by preserving the distinctive character of residential and commercial districts.*

Policies

LU-P-1.1 *Maintain and implement the General Plan Land Use Map that provides a description and location of land uses. Only permit development that is consistent with the General Plan. Require all projects to meet density, floor area ratio and all other standards applicable to individual land use designations.*

LU-P-2.1 *Recognize Downtown as the City's Priority Development Area (PDA) as per the Association of Bay Area Government's regional plan, and support land use patterns in the PDA that will attract and serve riders of public transit. Plan for the transformation of Downtown Martinez into a pedestrian oriented commercial district as a result of its proximity to transit and new infill development. The downtown district should contain a mix of office,*

retail, government, high and mid density residential, cultural and entertainment land uses, designed to create an active lively streetscape and a sense of place.

LU-P-2.2 *Consider new infill and development projects within the Downtown, which are consistent with the City's land use map and compatible with surrounding uses.*

LU-P-2.3 *Acknowledge the unique historic character of the Central Residential areas and facilitate maintenance and upgrading of existing structures that are currently seen as nonconforming by conventional zoning standards. Traditional design elements, such as covered front porches, should be encouraged.*

LU-P-2.4 *New multi-family residential development should be visually and functionally integrated and consistent in scale, mass, and character when located within an existing residential neighborhood.*

LU-P-4.1 *Continue to encourage and support the Design Review process for residential and commercial projects to ensure compatibility with the existing historic character.*

LU-P-4.2 *Protect the character of single-family residential neighborhoods through the preservation and improvement of their character-defining features. Such features include but are not limited to tree-lined streets, building orientation, sidewalks, and architectural scale and quality.*

LU-P-4.3 *Allow the conversion of older single family homes for commercial uses within commercially zoned areas of the Downtown and along commercially zoned corridors where residential use is no longer desirable. This will encourage adaptive reuse as opposed to demolition, helping achieve some preservation of historic character.*

Implementation Measures

LU-1.1a *Amend the Zoning Ordinance to implement new General Plan Land Use Designations to ensure consistency with the General Plan.*

LU-1.1b *Consider a development impact fee to be applied to all development applications to fund the cost of maintaining and updating the General Plan, Zoning Ordinance, Specific Plans and development of design guidelines.*

LU-4.1a *Consider Zoning Ordinance and/or Specific Plan amendments to strengthen design guidelines within the Downtown Specific Plan to preserve, enhance and complement the existing character in Downtown Martinez and other historic commercial and residential areas.*

LU-4.1b *Design Review Committee should continue to review and recommend approval of development in Downtown.*

LU-P-8.1b *New development should complement the existing environment in terms of form, scale and physical appearance. Structures should complement the existing topography to the greatest extent possible while reducing visual impacts of such development through the use of landscaping and sitting techniques.*

Parks Community Facilities and Utilities Element

Goals

PCU-G-3 *An interconnected Trail System providing access to recreational opportunities should continue to be developed and enhanced as funding permits.*

Policies

PCU-P-3.1 *Improve trail connections within and beyond the City Limits and coordinate funding for trail acquisition, construction and maintenance, whenever feasible.*

PCU-P-3.2 *Locate and construct new trails where access is easy to maximize their potential use and enjoyment by residents and visitors. Consider locating new trails within unused street rights-of-way (such as the Panoramic Drive "paper street" between Green Street and Thomas Drive).*

PCU-P-3.3 *Incorporate trail development in the City's Capital Improvement Program (CIP).*

PCU-P-3.4 *When considering development on parcels providing missing links in the planned trail system; Trails and connections should be incorporated into the development plan with a possible easement or dedication of public right-of-way when possible.*

PCU-P-3.5 *Work with the East Bay Regional Parks District (EBRPD), Contra Costa Water District, Contra Costa County, adjacent cities, regional trail groups, and other public agencies on trail planning issues, such as trail development and linkages.*

PCU-P-3.6 *Construct trails according to the standards established by the California Trails Manual and EBRPD standards.*

PCU-P-3.7 *Locate new trails with an emphasis on scenic qualities and making connections with local and regional open space areas, parks, points of interest and community facilities.*

PCU-P-3.8 *When appropriate, encourage the public purchase of private lands for the preservation of open space ridge lines.*

PCU-P-3.9 *Require future development within or upon ridgelines to include a condition of approval to provide access to and from or through the development via public trails.*

Impact 3.10-2: General Plan implementation would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect (Less than Significant)

STATE PLANS: The proposed General Plan was prepared in conformance with State laws and regulations associated with the preparation of general plans, including requirements for environmental protection. Discussion of the proposed General Plan's consistency with State regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant Sections of this Draft EIR. The State would

continue to have authority over any State-owned lands in the vicinity of the City and the proposed General Plan would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

BAY PLAN: The proposed General Plan does not conflict with the Bay Plan. Areas designated as "Waterfront Park, Beach" by the Bay Plan are designated OS-P, PR, and D-G. Areas designated Salt Marsh by the Bay Plan are mainly designated OS-P, PR, and I-M by the proposed project. Areas designated Industrial, Water-related Industry by the Bay Plan are designated Industrial and Manufacturing I-M by the proposed project. Future development proposals located within 100 feet of the bay would be subject to review and permitting by BCDC. As part of the review process, the proposals would be required to comply with applicable provisions of the Bay Plan.

CITY PLANS: As set forth by State law, the General Plan serves as the primary planning document for the City and subordinate documents and plans would be updated to be consistent with the General Plan. Similar to the existing General Plan, the proposed General Plan focuses on ensuring that the City's quality of life is maintained, that increased opportunities for local job growth and economic development are provided, that preservation uses and activities are maintained and enhanced within the Planning Area. The proposed General Plan carries forward and enhances policies and measures from the City's existing General Plan that were intended for environmental protection, and would not remove or conflict with City plans, policies, or regulations adopted for environmental protection. The proposed General Plan would require modifications to the City's Zoning Ordinance. These modifications will provide consistency between the General Plan and Zoning Ordinance and do not propose to remove or adversely modify portions of the Martinez Municipal Code that were adopted to mitigate an environmental effect. Policy LU-2.1a requires the City to continue to implement the Downtown Specific Plan. The proposed General Plan goals, policies, and Land Use Map have been prepared to be consistent with the Downtown Specific Plan and do not restrict or conflict with portions of the Downtown Specific Plan that address environmental impacts. The proposed General Plan has been developed to be consistent with the adopted Alhambra Valley Specific Plan and has been designed to encourage its implementation. The proposed General Plan Land Use Map is consistent with the land use designations identified in the Alhambra Valley Specific Plan. As part of the annexation approval process, Land Use Goals unique to the Alhambra Valley (which are contained in the Alhambra Valley Specific Plan, adopted by Contra Costa County in 1992) were adopted by the City and integrated into its General Plan. The proposed General Plan carries forward the goals, policies and implementation measures contained in the current General Plan (land Use goals LU-G-6 through LU-G-9).

The General Plan Update includes modifications to the General Plan Land Use Diagram. The proposed Land Use Map is depicted in Figure 2-2 and the proposed Land Use Map is depicted in Figure 3.10-3. The revisions to the Land Use Diagram are consistent with the City's overall objectives provided in Chapter 2.0, Project Description.

Implementation Measure LU-1.1a ensures the continued support and effort to amend the Zoning Ordinance to implement new General Plan Land Use Designations to ensure consistency with the General Plan, and to develop design guidelines as part of the Zoning Ordinance revision. Implementation Measure LU-1.1b supports the establishment of a surcharge fee to apply to all development applications to fund the cost of maintaining and updating the General Plan, Zoning

Ordinance, Specific Plans, and development of design guidelines to ensure consistency between planning documents.

While the proposed General Plan has been developed to be largely consistent with adopted plans and regulations, the General Plan Land Use Map designates lands for residential development that are identified as open space, including existing Open Space-Private, Open Space and Recreation, Public Permanent Open Space, and Open Space Conservation Use Land. This includes the 635 Vine Hill Way (APN 162420003) discussed in Section 3.1, Aesthetics. These lands are generally designated for lower density residential development (HRR, RVL, RL, MDRL, and Alhambra Valley designations) under the existing General Plan. In some cases, the redesignation reflects existing development on parcels and would not provide for additional density. However, there would be parcels currently designated as open space that would be allowed to develop with additional low density uses under the proposed project. Environmental impacts , including aesthetics, air quality, biological resources, noise, transportation and traffic, and utilities, associated with potential development under the proposed General Plan are discussed in Sections 3.1 through 3.9 and 3.11 through 4.0 of this Draft EIR.

OTHER PLANS: Plans including the East Contra Costa County Conservation Plan, and the Delta Plan, are located near the City's influence, but outside the City and SOI, thus the implementation of the proposed General Plan would not be in conflict with either plan.

SUMMARY: Subsequent development projects would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted to mitigate environmental effects by the City, as well as those adopted by agencies with jurisdiction over components of future development projects. The General Plan includes policies and implementation measures to ensure that future projects adhere to land use policies and regulations providing environmental protection. The proposed General Plan would not have a significant conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect. Therefore, this impact is **less than significant**.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Land Use Element

Goal

LU-G-1 Promote a balanced land use pattern, a mix of which enhances community character and serves the needs of existing and future residents. Encourage land use development to occur in an orderly fashion and in pace with the expansion of public facilities. Provide appropriate transitions between single family neighborhoods and higher intensity uses.

Policies

LU-P-1.1 Maintain and implement the General Plan Land Use Map that provides a description and location of land uses. Only permit development that is consistent with the General Plan. Require all projects to meet density,

floor area ratio and all other standards applicable to individual land use designations.

Implementation Measures

LU-1.1a *Amend the Zoning Ordinance to implement new General Plan Land Use Designations to ensure consistency with the General Plan.*

LU-1.1b *Consider a development impact fee to be applied to all development applications to fund the cost of maintaining and updating the General Plan, Zoning Ordinance, Specific Plans and development of design guidelines.*

Implementation Measures

LU-5.1a *Develop the Marina Land Use Plan as required. In September 2014 the Governor approved Senate Bill No. 1424 granting the City of Martinez all right, title and interest in the Marina and the associated landside parcels. The bill requires that the City of Martinez submit by January 1, 2020 a trust lands use plan. The Trust Land Use Plan shall describe any proposed development, preservation or other use of the property and requires the State Lands Commission approval for any amendments. Consideration should be given to including in the Plan uses proposed and appropriate for the marina and landside areas including possible water oriented recreation opportunities and analyze revenue sources and to maintain fiscal stability at the marina.*

Goal

LU-G-6 *Preserve and enhance both the natural and man-made environment in Alhambra Valley.*

Policies

LU-P-6.1 *Structures shall be designed to blend into, rather than dominate the natural setting, especially on ridgelines. The massing of new dwellings should be compatible with the natural setting.*

Implementation Measures

LU-I-6.1a *Strengthen design guidelines to require development proposals to include an environmentally-superior design alternative as part of the environmental review process.*

LU-P-6.1b *Only allow development which is sensitive to available natural resources and features. New development shall generally conform to natural contours and avoid excessive grading.*

LU-P-6.1c *Hilltop ridges, rock outcroppings, mature stands of trees and other natural features shall be preserved to the greatest extent possible in the design of new projects.*

Goal

LU-G-7 *Encourage the preservation of existing agricultural businesses and minimize and resolve conflicts between agricultural and urban uses within and adjacent to the Alhambra Valley semi-rural residential community.*

Policies

LU-P-7.1 *Agriculture shall be protected to maintain the semi-rural atmosphere and to retain a balance of land uses in Alhambra Valley*

Implementation Measures

LU-7.1a *Consider the adoption and maintenance of regulations for new development in and adjacent to agricultural areas that ensure its compatibility with agricultural uses. Consideration should be given to appropriate setbacks for structures located within or adjacent to cultivated agricultural lands.*

LU-7.1b *Consider information brochures or handouts that inform and educate perspective home buyers in or near agricultural areas regarding the incompatibility and hazards associated with nearby agricultural practices.*

Goal

LU-G-8 *Preserve areas of high scenic value and the rural-residential atmosphere in the area within Alhambra Valley.*

Policies

LU-P-8.1 *To the extent feasible, scenic features should be protected or maintained, either through land dedication to a public agency or through the granting of scenic or conservation easements.*

LU-P-8.2 *High quality engineering of slopes shall be required to avoid soil erosion, downstream flooding, slope failure, loss of vegetative cover, high maintenance costs, property damage, and damage to visual quality.*

LU-P-8.3 *In order to conserve the scenic beauty of Alhambra Valley, developers shall generally be required to restore the natural contours and vegetation of the land after grading and other land disturbances. Public and private projects shall be designed to minimize damage to significant trees and other visual landmarks.*

LU-P-8.4 *Extreme topographic modification, such as filling in canyons or removing hilltops shall be avoided. Clustering and planned development approaches to development shall be encouraged. All future development plans, whether large-scale or small-scale, shall be based on identifying safe and suitable sites for buildings, roads, and driveways.*

LU-P-8.5 *The construction of new structures on the top of scenic ridges or within 50 feet of the ridgeline shall be discouraged.*

LU-P-8.6 *Enhance and protect access to established scenic routes through the development of trails and other facilities.*

LU-P-8.7 *New projects shall be designed to blend in with the rural setting of Alhambra Valley as much as possible. The use of fire resistant materials shall be encouraged.*

LU-P-8.8 *New buildings which are proposed in highly visible areas, such as on hillsides, shall be sited, designed, and landscaped so that supporting columns, piers, and building undersides are not visually dominant.*

LU-P-8.9 *The use of scenic easements shall be encouraged to protect agricultural and park lands which abut land with urban land use designations such as residential and commercial uses.*

LU-P-8.10 *Preserve the visually open character of Alhambra Valley and Reliez Valley Roads.*

Implementation Measures

LU 8.1a *Consider the adoption and maintenance of regulations that restrict the use of solid fencing and encourage the use of low, open rail type fencing.*

LU-P-8.1b *New development should complement the existing environment in terms of form, scale and physical appearance. Structures should complement the existing topography to the greatest extent possible while reducing visual impacts of such development through the use of landscaping and sitting techniques.*

LU-8.1c *Consider the adoption and maintenance of regulations and design standards for new residential development to preserve the rural residential atmosphere in Alhambra Valley.*

LU-8.1d *Maintain standards through the review and approval process for development of hillsides to protect slopes and minimize visual impacts.*

Goal

LU-G-9 *Ensure that new public service facilities, which are needed to provide adequate levels of service within Alhambra Valley, are sensitive to the natural setting.*

Policies

LU-P-9.1 *Dedication of public roads in unstable hillside areas shall generally not be accepted by the City. Consideration may be given to acceptance where stability can be assured and where such roads are fully developed and provide through access to other existing development.*

LU-P-9.2 *Control erosion in natural watercourses where creek capacity and bank stability necessitate, as per applicable creek preservation and improvement plan.*

Implementation Measures

LU-9.1a *Improvement plans shall require new development to provide on-site storm water and drainage facilities which accommodate full build out and consider a range of design alternatives.*

Impact 3.10-3: General Plan implementation has the potential to Conflict with any applicable habitat conservation plan or natural community conservation plan (no impact)

As described in Section 3.3, the boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is approximately 15 miles east of the City of Martinez. There are no other HCP/NCCPs applicable to the General Plan. Implementation of the proposed project would have ***no impact*** relative to this issue.

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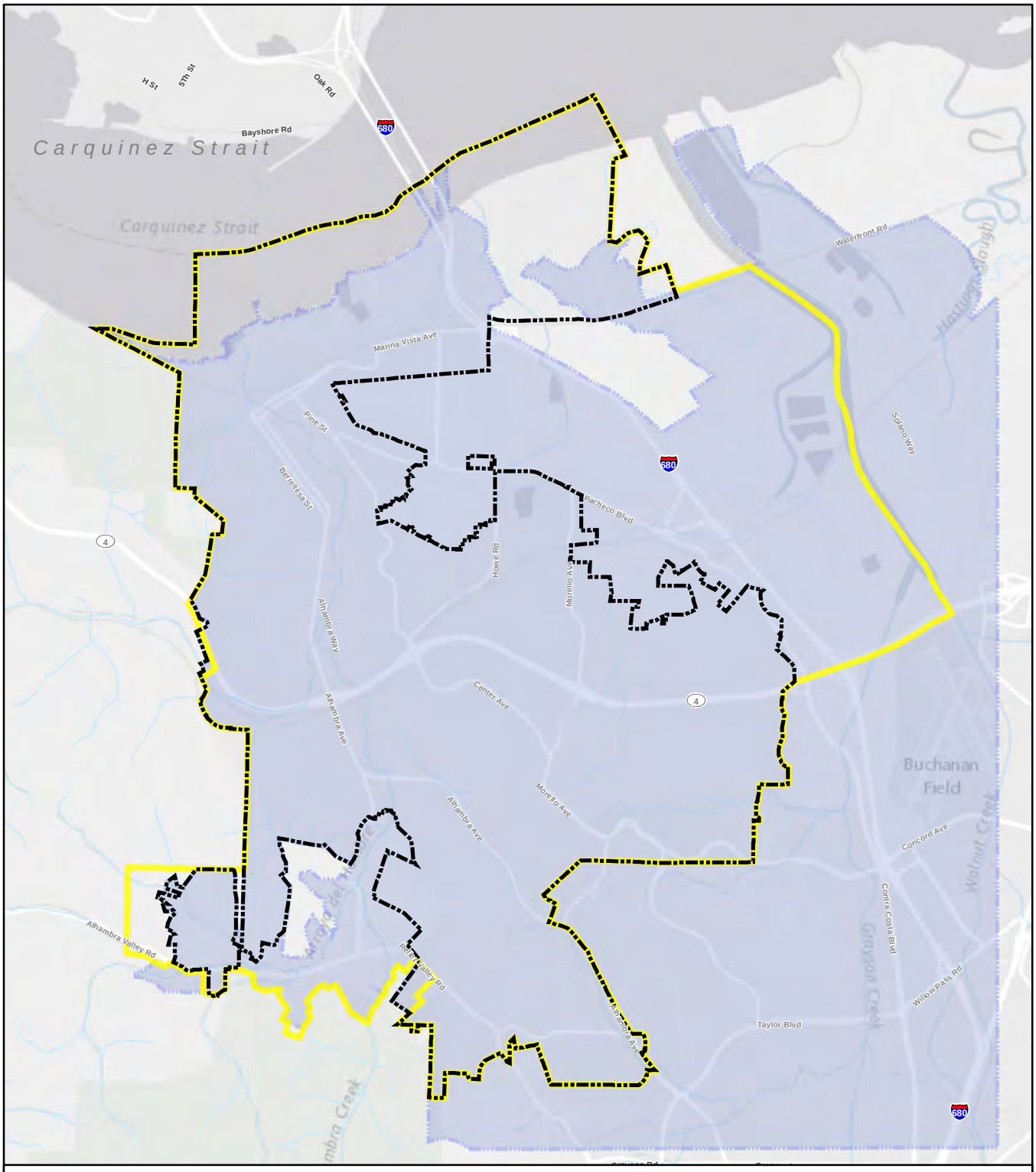

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.10-1: Study Area Key Boundaries

Legend

- City Limit
- Sphere of Influence
- Urban Limit

N

0 ½ 1

Miles

Data sources: City of Martinez GIS; Contra Costa County GIS; ESRI StreetMap North America; ArcGIS Online Basemap Service
Map date: December 11, 2014. (MartinezGPEIR_KeyBounds_Fig3-9-1_141211)

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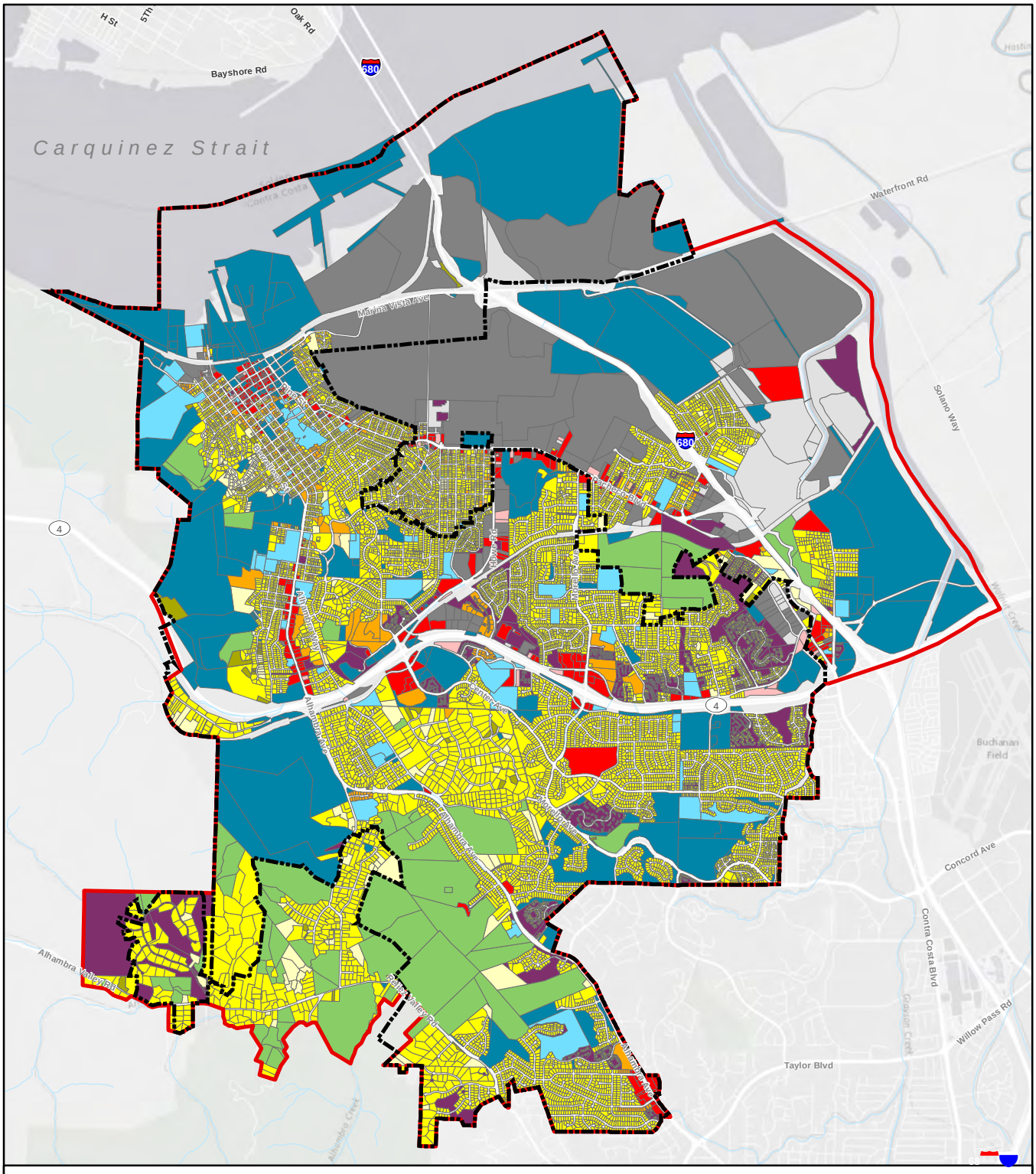

Assessor's Use Code Category

- Commercial
- Commercial - Vacant
- Industrial
- Industrial - Vacant
- Institutional
- Institutional - Govt-Owned
- Land
- Miscellaneous
- Multiple
- Multiple - Vacant
- Residential
- Residential - Vacant
- Residential - Vacant - Unbuildable

Planning Areas

- City Limits
- Sphere of Influence

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.10-2: Assessed Land Uses

N

0 ½ 1

Miles

Data sources: City of Martinez GIS; Contra Costa County GIS; ESRI StreetMap North America; ArcGIS Online Basemap Service. Map date: December 11, 2014. (MartinezGPEIR_AssessedLU_Fig3-9-2_141211)

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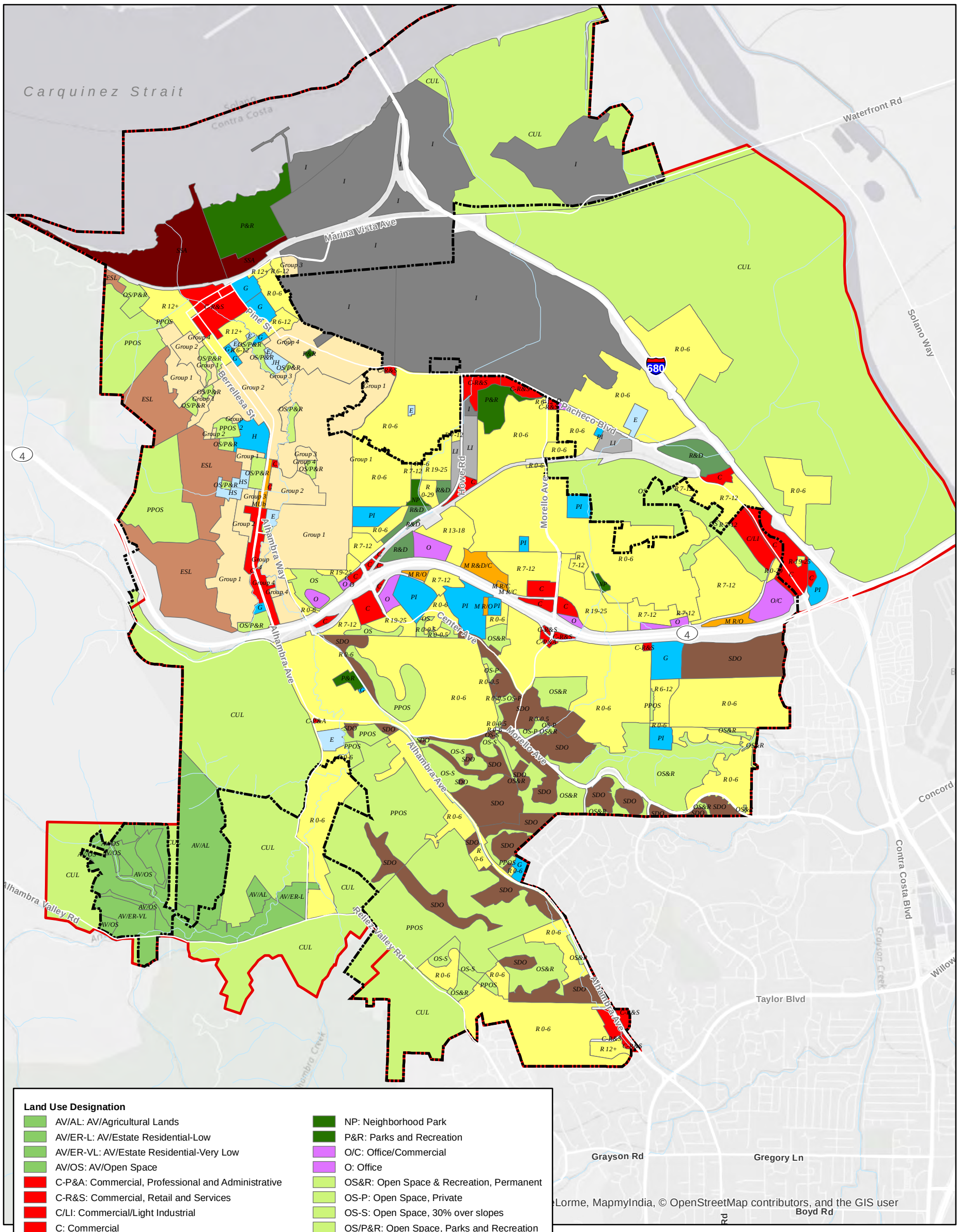

Land Use Designation

- AV/AL: AV/Agricultural Lands
- AV/ER-L: AV/Estate Residential-Low
- AV/ER-VL: AV/Estate Residential-Very Low
- AV/OS: AV/Open Space
- C-P&A: Commercial, Professional and Administrative
- C-R&S: Commercial, Retail and Services
- C/LI: Commercial/Light Industrial
- C: Commercial
- E: Elementary
- HS: High School
- JH: Junior High
- G: Governmental
- PI: Public Institution
- H: Hospital
- Group 1: Residential, Group 1
- Group 2: Residential, Group 2
- Group 3: Residential, Group 3
- Group 4: Residential, Group 4
- LI: Light Industrial
- I: Industrial
- M R&D/C: Mixed Research and Development/Commercial
- M R/C: Mixed Residential (up to 29 units)/Commercial
- M R/O: Mixed Residential (up to 29 units)/Office
- MUb: Commercial and Group 2 Residential
- NP: Neighborhood Park
- P&R: Parks and Recreation
- O/C: Office/Commercial
- O: Office
- OS&R: Open Space & Recreation, Permanent
- OS-P: Open Space, Private
- OS-S: Open Space, 30% over slopes
- OS/P&R: Open Space, Parks and Recreation
- OS: Open Space
- PPOS: Public Permanent Open Space
- CUL: Open Space/Conservation Use Land
- R 0-0.5: R 0-0.5
- R 0-29: R up to 29
- R 0-6: R 0-6
- R 12+: R 12 and over
- R 13-18: R 13-18
- R 19-25: R 19-25
- R 6-12: R 6-12
- R 7-12: R 7-12
- R-19-25: R 19-25
- R&D: Research and Development
- ESL: Environmentally Sensitive Land
- SDO: Slope Density Ordinance
- SSA: Special Study Area

Planning Areas

- City Limits
- Sphere of Influence

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.10-3: Current General Plan Land Use Map

N

0 1,500 3,000

Feet

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A Land Use Planning, Design, and Environmental Firm

Sources: City of Martinez GIS; Contra Costa County GIS; ESRI StreetMap North America; ArcGIS Online Basemap Service. Map date: December 11, 2014. (MartinezGPEIR_CurrentGPLU_Fig3-9-3_141211)

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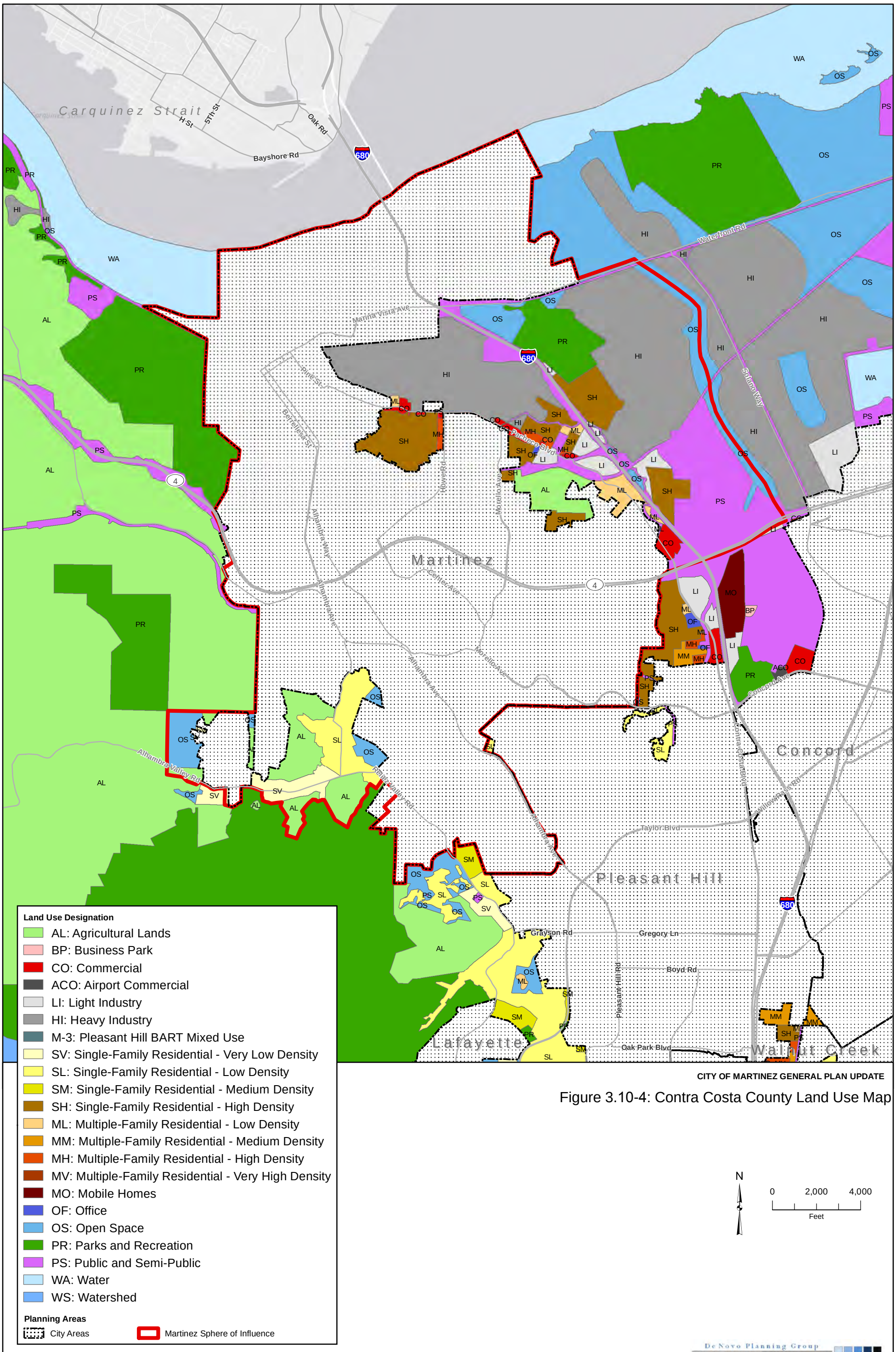

Sources: City of Martinez GIS; Contra Costa County GIS; ESRI StreetMap North America; ArcGIS Online Basemap Service. Map date: December 11, 2014. (MartinezGPEIR_CCCGPLU_Fig3-9-5_141211)

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.10-4: Contra Costa County Land Use Map

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This section of the EIR assesses potential effects, impacts, and mitigation measures related to noise and vibration associated with implementation of the proposed project. There were no comments received during the NOP scoping period related to this environmental topic. Noise data used for analysis in this section was provided by the City of Martinez General Plan Update Noise Element Background Report (Noise Background Report) prepared by Illingworth & Rodkin in October 2014 which was conducted as part of the preparation of the Noise Element. The Noise Background Report analyzed both long and short-term noise for various locations throughout the Planning Area.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
dBA	A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.

L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected, or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-

state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to Ldn, but includes a +3 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL (DBA)	COMMON INDOOR ACTIVITIES
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. NOVEMBER 2009.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

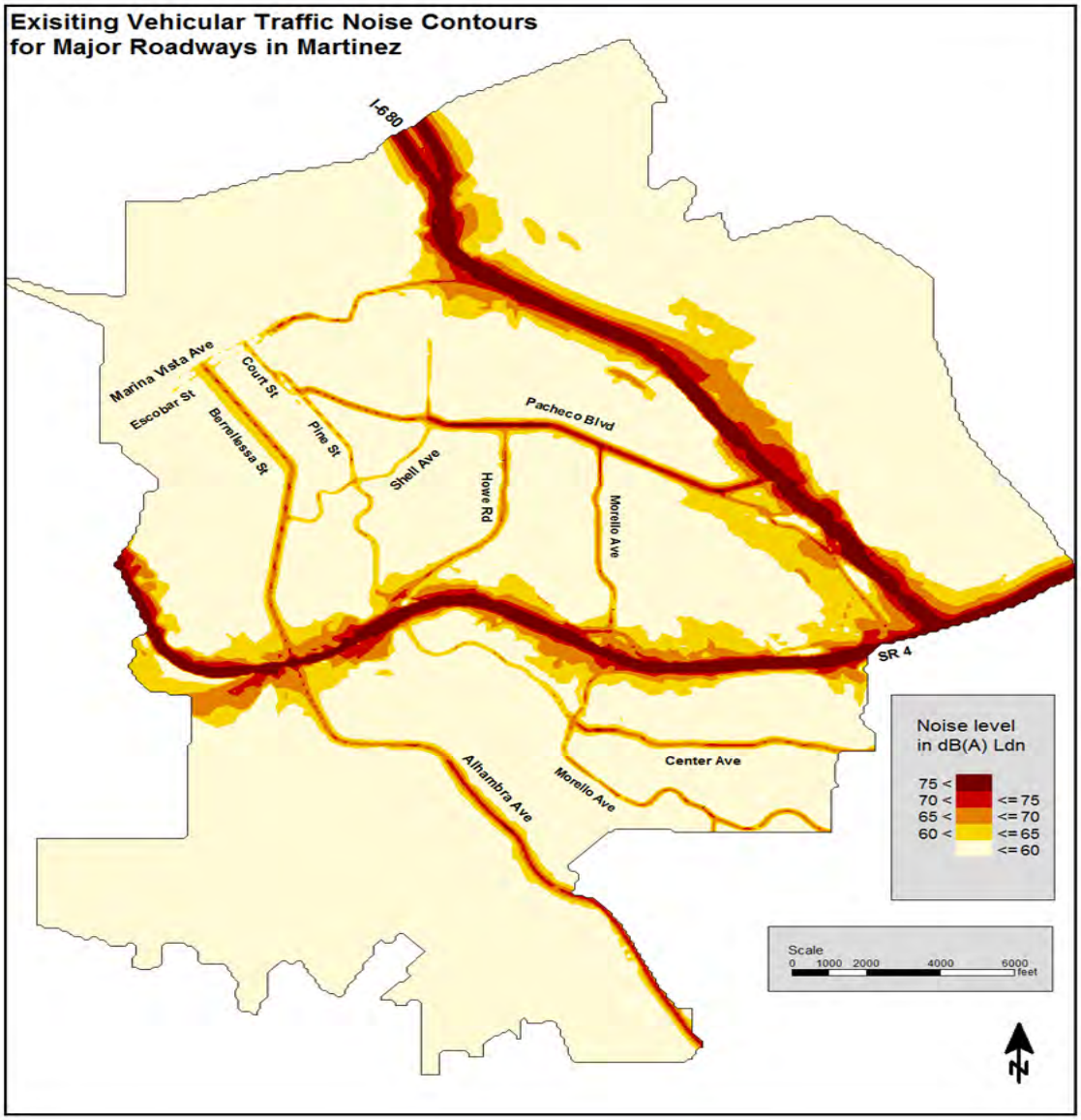
Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Transportation

The greatest sources of existing noise within the Martinez area are attributable to transportation. Transportation noise primarily depends on the speed and percentage of the noise source. Significant transportation facilities within or adjacent to the area include: Interstate Highway 680, State Highway 4, Union Pacific and BNSF railroads, major arterials, local streets, and the Buchanan Field Airport. Exhibit 3.11-1 shows existing vehicular traffic noise at major roadways throughout the city.

EXHIBIT 3.11-1: EXISTING NOISE CONTOURS AT MAJOR ROADWAYS



Other Noise Sources

Although transportation is the primary source of noise in Martinez, other sources of noise do exist. These sources include domestic activities (i.e. car alarms, loud music, barking dogs), construction and demolition, landscaping and maintenance activities, industrial businesses with outdoor operations, commercial businesses with outdoor entertainment, late-night activities, mechanical equipment, street sweepers, parking lot activities, and loading/unloading activities. Many of these noises can be as disruptive as background transportation noise, but are usually temporary and intermittent.

Community Noise Survey

The Noise Background Report conducted as part of the preparation of the Noise Element identified community noise levels. Continuous types of noise recordings were made at 10 locations with a Larson Davis Laboratories Type 820 precision sound level meter. Calibration took place at the beginning of the noise survey and post calibrated at the end of the survey. No corrections were necessary. The Noise Background Report analyzed both long and short term noise for various locations. The long term noise readings included a twenty four hour reading and analysis, while the short term readings were conducted during the day light hours only. The readings were conducted for a period of two days from February 19, 2014 to February 21, 2014. Two hours of daytime noise and one hour of night time noise were recorded. Exhibit 3.11-2 displays the noise monitoring locations throughout the Planning Area. Noise measurements from LT-1 through LT-4 are shown on Exhibits 3.11-3 through 3.11-10.

EXHIBIT 3.11-2: NOISE MONITORING LOCATIONS

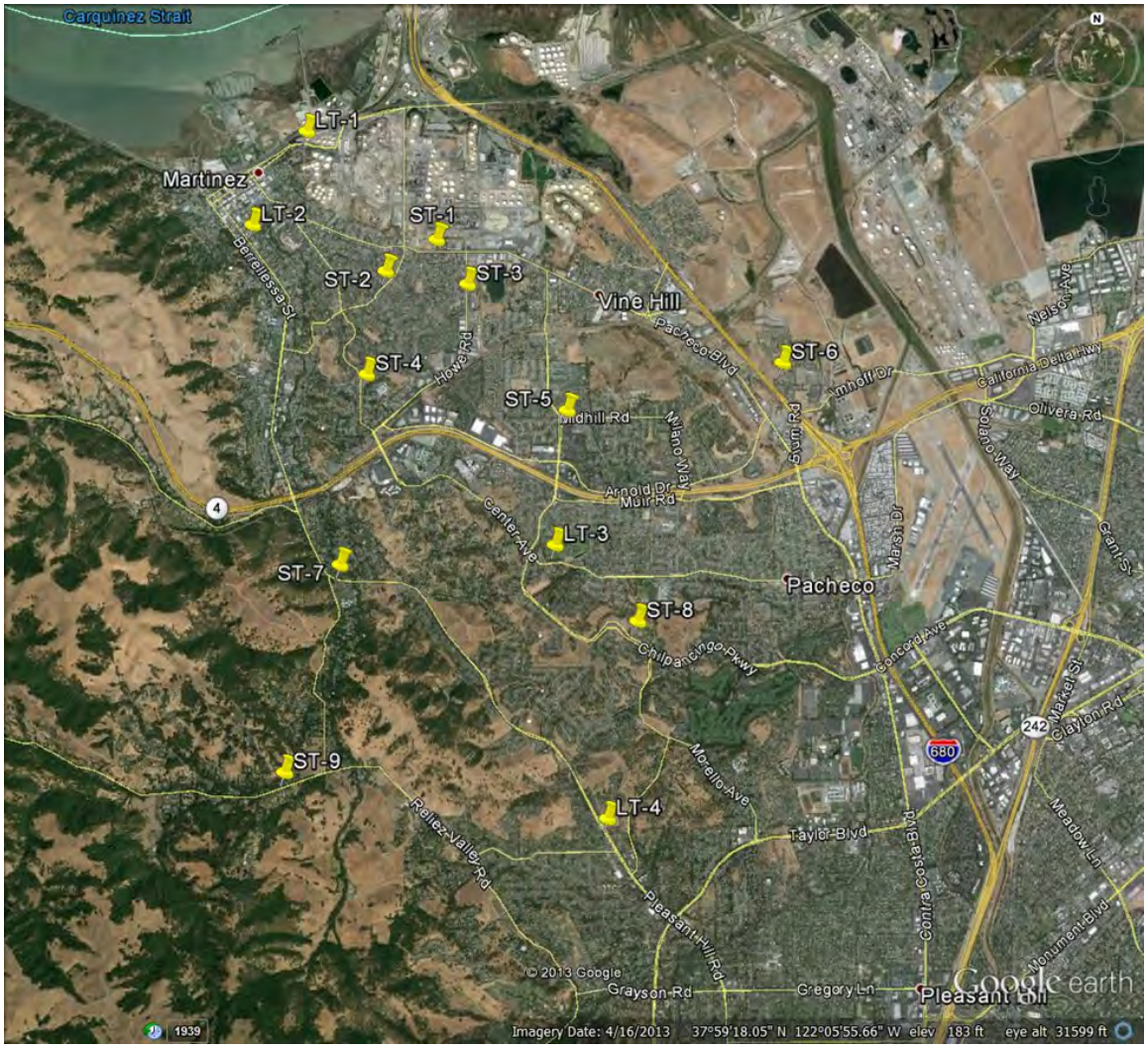


EXHIBIT 3.11-3: NOISE LEVELS AT LT-1, FEBRUARY 19-20, 2014

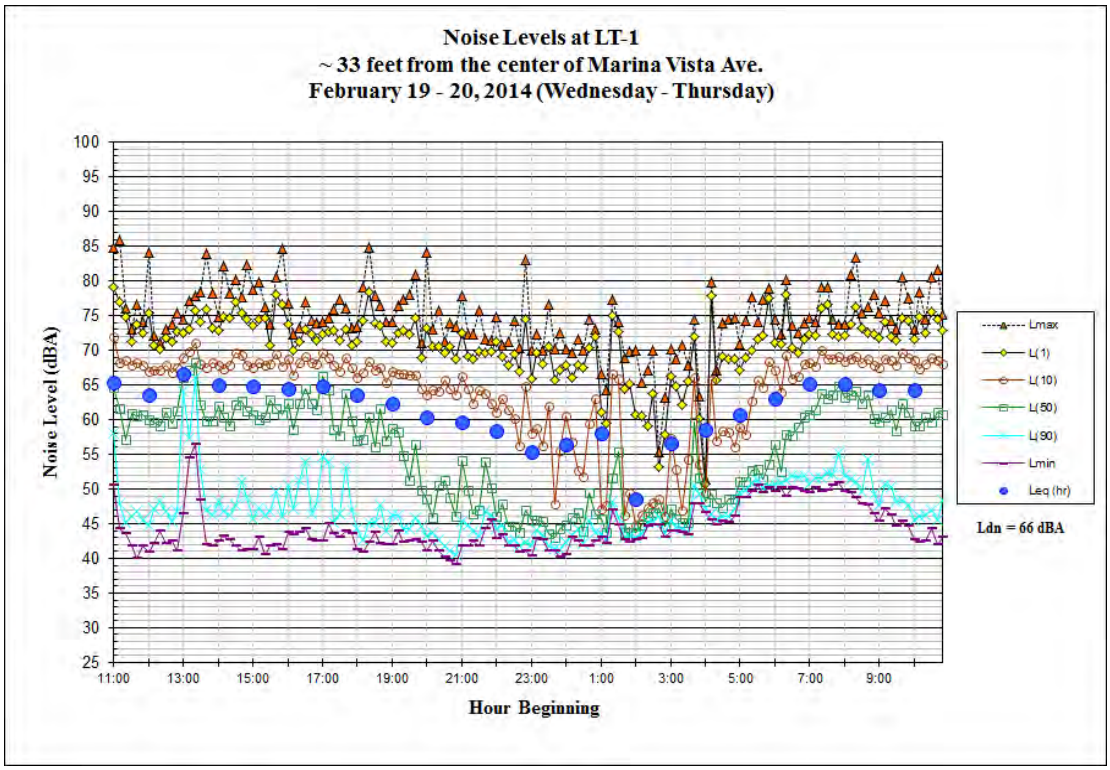


EXHIBIT 3.11-4: NOISE LEVELS AT LT-1, FEBRUARY 20-21, 2014

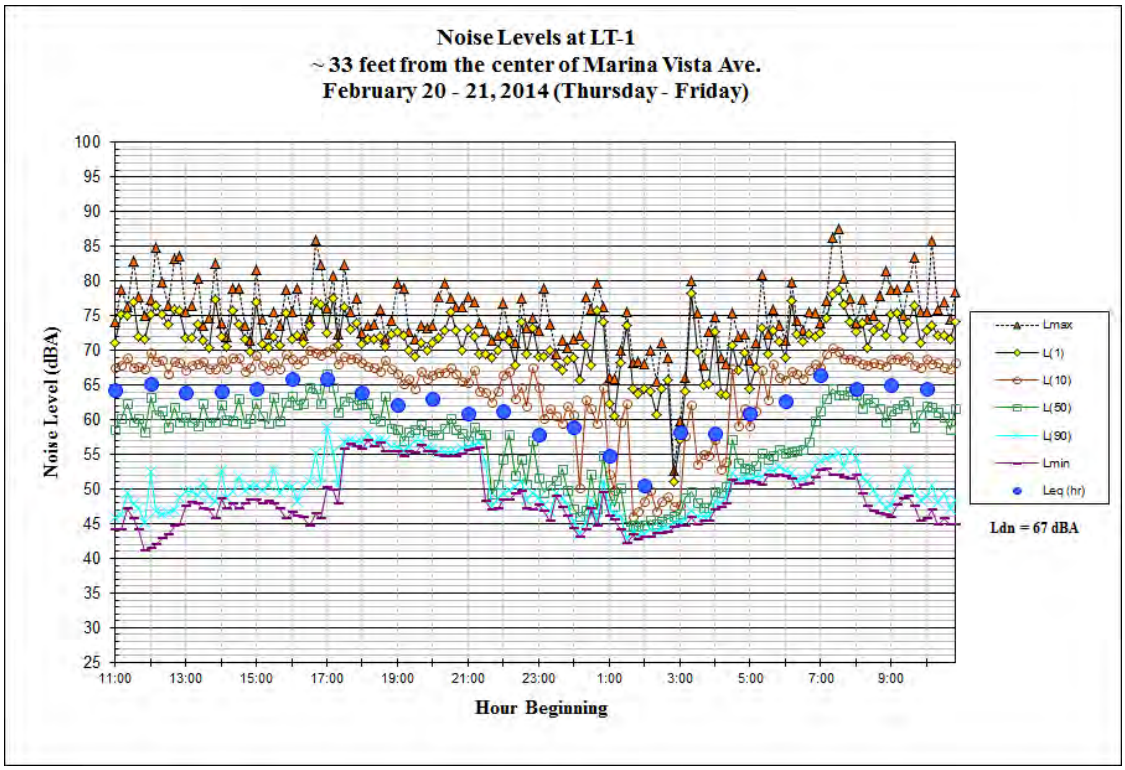


EXHIBIT 3.11-5: NOISE LEVELS AT LT-2, FEBRUARY 19-20, 2014

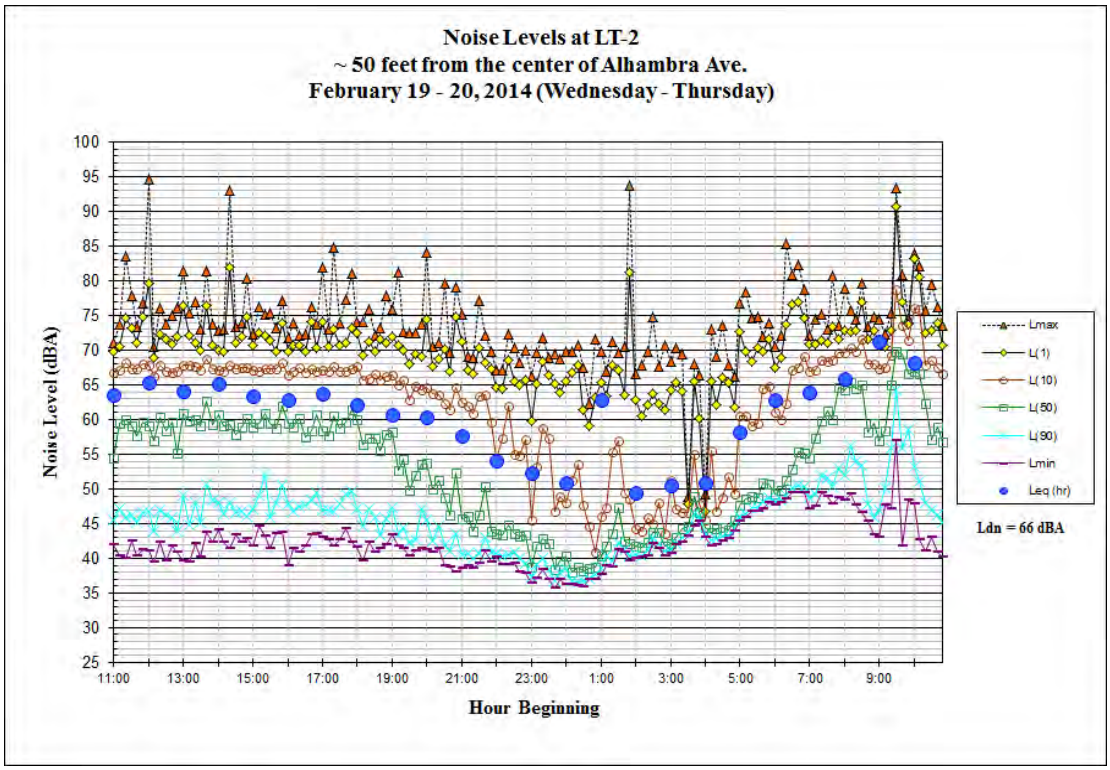


EXHIBIT 3.11-6: NOISE LEVELS AT LT-2, FEBRUARY 20-21, 2014

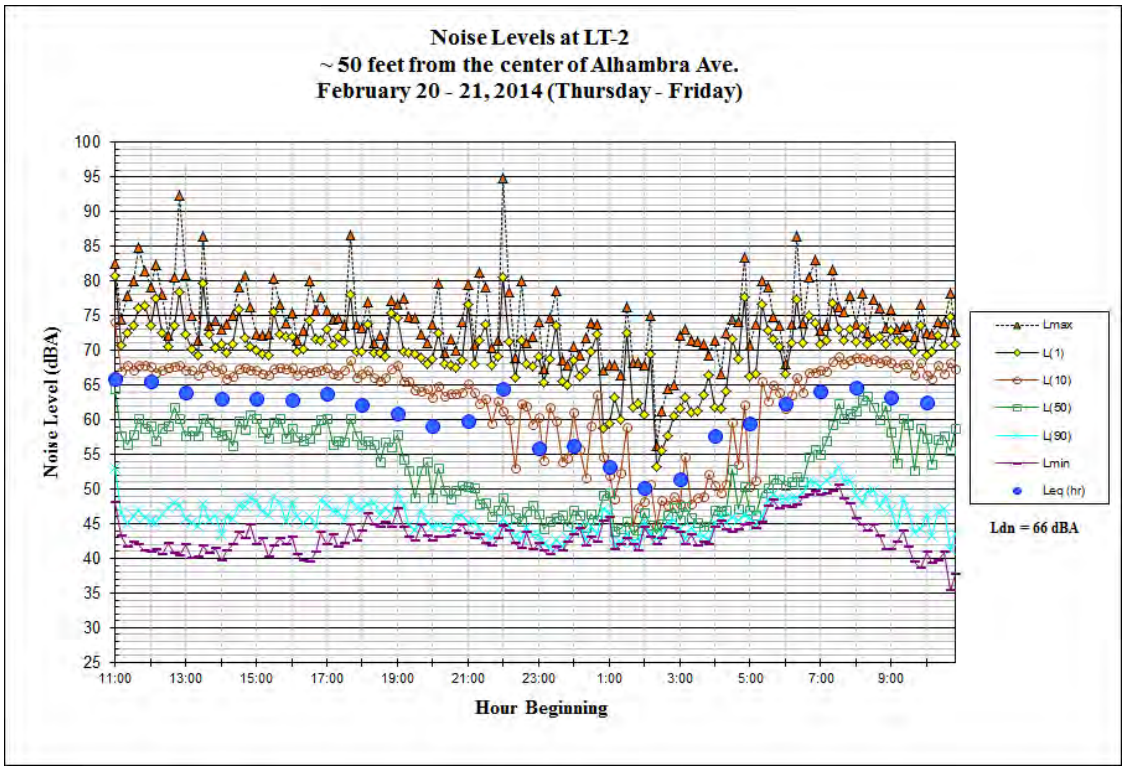


EXHIBIT 3.11-7: NOISE LEVELS AT LT-3, FEBRUARY 19-20, 2014

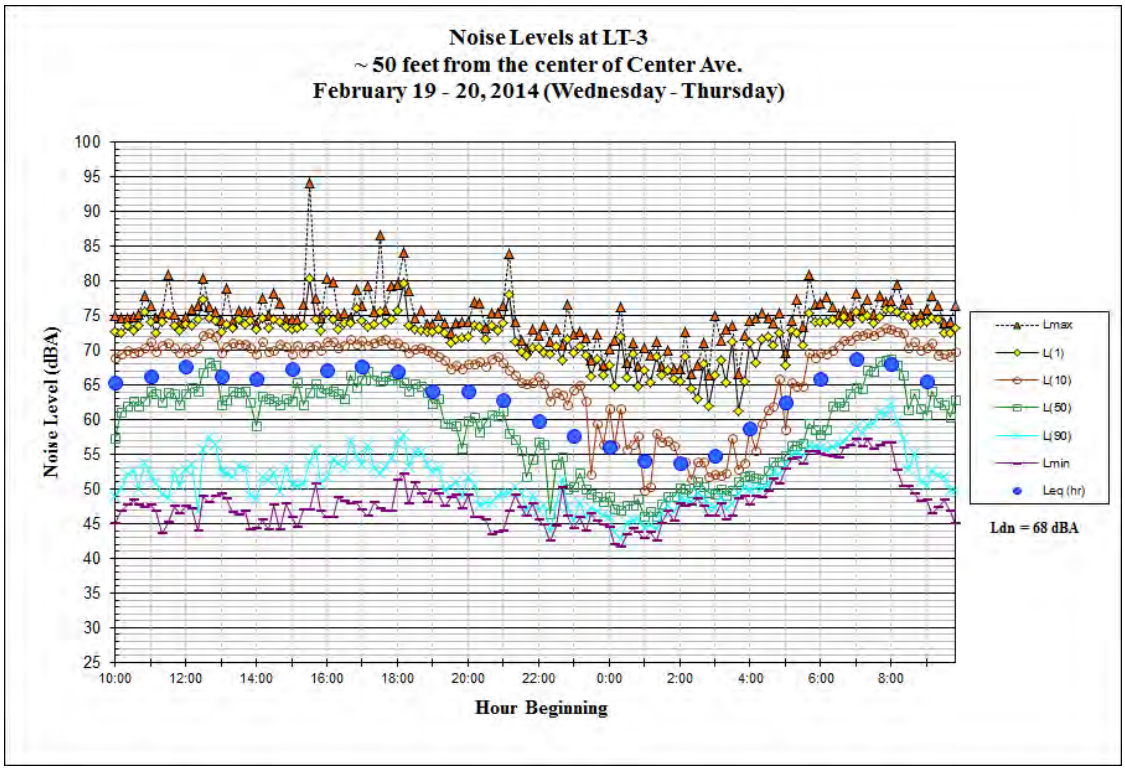


EXHIBIT 3.11-8: NOISE LEVELS AT LT-3, FEBRUARY 20-21, 2014

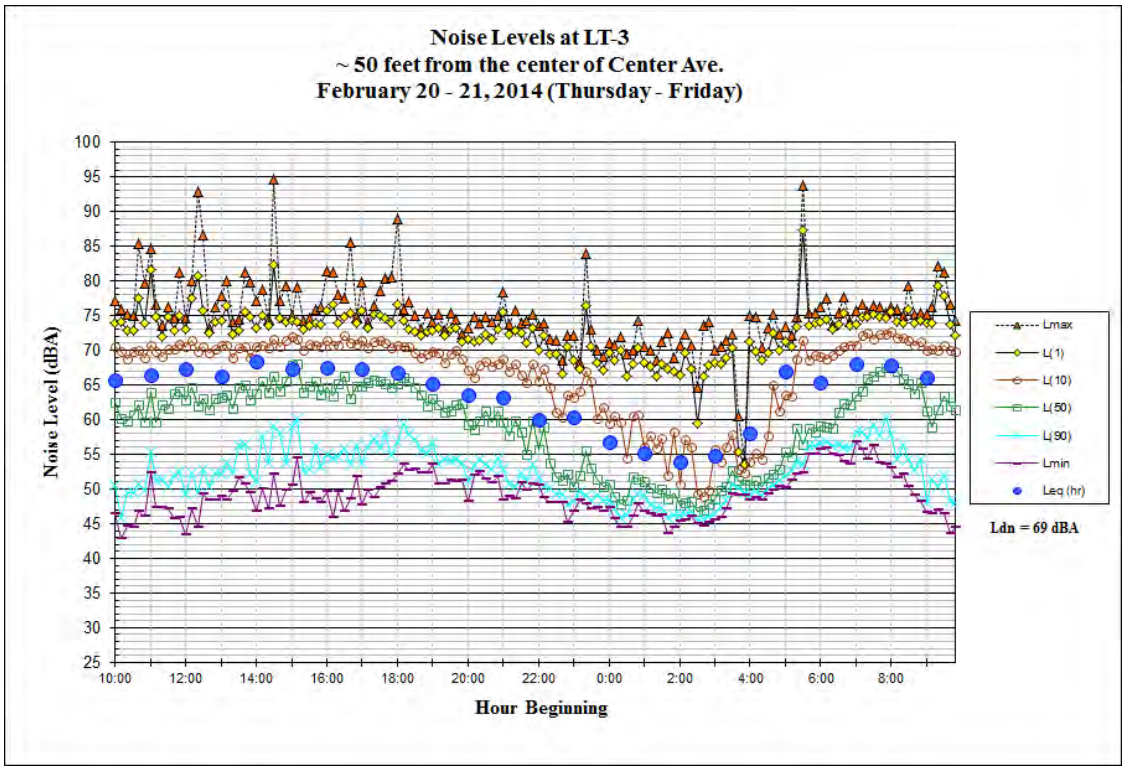


EXHIBIT 3.11-9 NOISE LEVELS AT LT-4, FEBRUARY 19-20, 2014

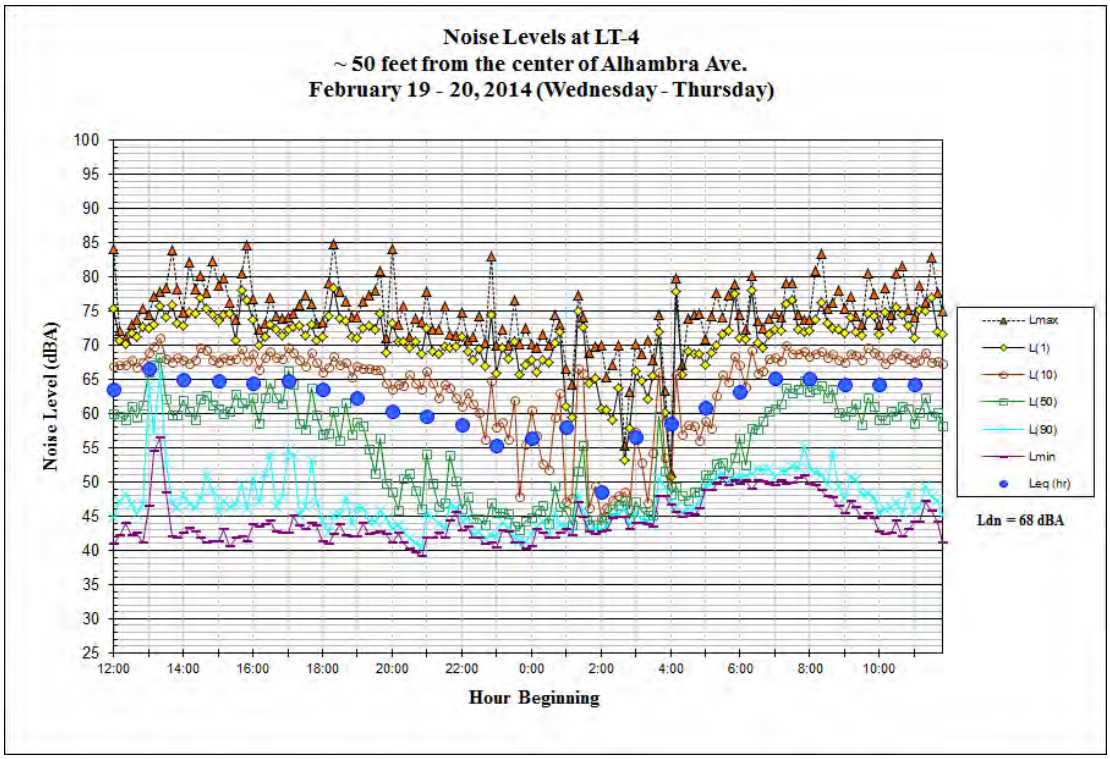
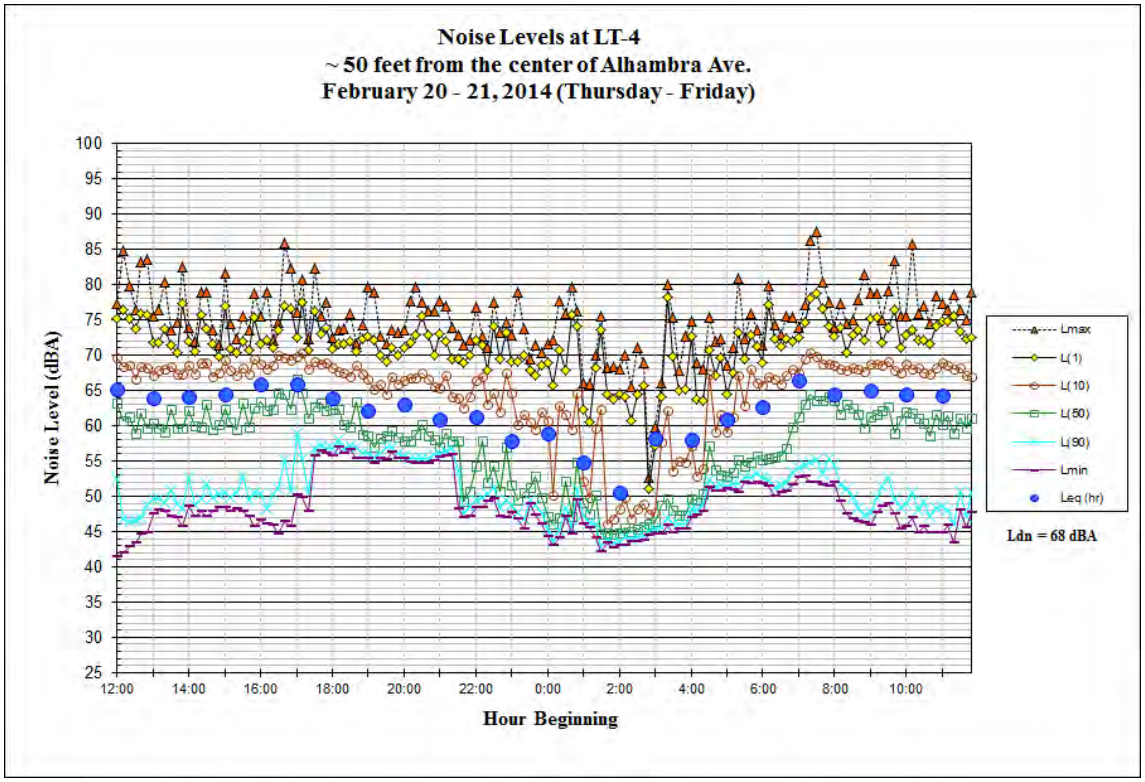


EXHIBIT 3.11-10 NOISE LEVELS AT LT-4, FEBRUARY 20-21, 2014



- Measurement LT-1 was taken 33 feet south of the center of Marina Vista Avenue where Escobar Street merges with Marina Vista Avenue. The measurement position was at the setback of a residential home. Vehicular traffic on the roadways was the dominant noise source affecting the noise measurement, with railroad pass-bys to the north contributing to the noise environment as well. The daily trend in noise levels at this location is shown on Exhibits 3.11-3 and 3.11-4. The measured day/night average noise level at this location was up to 67 dBA Ldn. Typical daytime Leq noise levels ranged from 60 to 67 dBA and typical nighttime Leq noise levels ranged from 49 to 61 dBA.

- Measurement LT-2 was taken east of Alhambra Avenue. This measurement location was also selected to characterize noise levels along a major road. The measurement position was in a tree about 50 feet from the centerline of Alhambra Avenue. The dominant source of noise was vehicular traffic on Alhambra Avenue. Measured data at Location LT-2 are shown on Exhibits 3.11-5 and 3.11-6. The measured noise level at this location was 66 dBA Ldn. Typical daytime Leq noise levels ranged from 60 to 71 dBA and typical nighttime Leq noise levels ranged from 49 to 63 dBA.

- Measurement LT-3 was taken on the south side of Center Avenue along Elder Drive. The measurement position was about 60 feet from the centerline of Center Avenue. Vehicular traffic along Center Avenue was the major source of noise. The day/night average noise level was measured to be up to 69 dBA Ldn. The measured data are shown on Exhibits 3.11-7 and 3.11-8. Typical daytime Leq noise levels ranged from 64 to 70 dBA and typical nighttime Leq noise levels ranged from 54 to 63 dBA.

- Measurement location LT-4 was taken 50 feet from the centerline of Alhambra Avenue along Roanoke Drive. Vehicular traffic along Alhambra Avenue was the major source of noise at this location. The day/night average noise level at this site was measured to be 68 dBA Ldn. Typical daytime Leq noise levels ranged from 60 to 67 dBA and typical nighttime Leq noise levels ranged from 49 to 61 dBA. Noise levels at this portion of the road reached as high as 94 dBA Lmax during daytime hours when there are bus and truck pass-bys and high engine vehicle noise.

Short-term noise measurements were conducted during the day on February 19, 2014 and February 21, 2014. The measured data from each location are summarized in Table 3.11-2. ST-1 was on Pacheco Boulevard, traffic from which was the significant contributor to measured noise levels. Noise from the refinery to the north was a secondary noise source at ST-1. At ST-2, local traffic on Shell Boulevard was the dominant source of noise. At ST-3, vehicular traffic on Howe Road was the only significant contributor to measured noise levels. At ST-4, vehicular traffic along Pine Street was the dominant source of noise. At ST-5, traffic along Morello Avenue was the only significant contributor to measured noise levels. ST-6 was located in a subdivision east of I-680, where traffic on I-680 was the significant contributor to measured noise levels. Traffic from Alhambra Boulevard was the primary contributor to measured noise levels at ST-7. ST-8 was located within Hidden Lakes Park along Morello Avenue/Chilpancingo Parkway, traffic from which was the significant contributor to measured noise levels. At ST-9, vehicular traffic on Reliez Valley Road was the dominant source of noise during the

measurement. Table 3.11-2 provides a summary of short-term noise measurement data. The following results for the Noise Background Report are provided below:

TABLE 3.11-2: SUMMARY OF SHORT-TERM NOISE MEASUREMENT DATA

NOISE MEASUREMENT LOCATION	L_{max}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}	L_{dn}
ST-1: 50 feet from the center of Pacheco Blvd. 500 feet from refinery noise source. (2/19/2014, 11:50a.m.-12:00 p.m.)	80	77	73	68	62	69	72
ST-2: Approximately 40 feet from Shell Ave., along Orange St. (2/19/2014, 1:10-1:20 p.m.)	79	72	67	50	41	62	65
ST-3: 55 feet from the center of Howe Rd. (2/19/2014, 12:30-12:40 p.m.)	76	74	71	60	49	66	69
ST-4: 40 feet from the center of Pine Street. (2/19/2014, 12:50-1:00 p.m.)	77	74	66	54	43	62	65
ST-5: 70 feet from center of Morello Ave. along Maywood Ln. (2/19/2014, 1:30-1:40 p.m.)	81	72	68	63	54	65	68
ST-6: Cul-de-sac of Blum View Dr., about 300 feet from I-680 lanes. (2/19/2014, 2:00-2:30 p.m.)	61	59	55	51	50	52	55
ST-7: 50 feet from Alhambra Blvd, south of SR 4. (2/19/14, 2:50-3:00 p.m.)	80	75	70	63	47	66	69
ST-8: From Hidden Lakes Park, 50 feet from nearest lane of Morello Ave/Chilpancingo Pkwy (2/19/2014, 2:30-2:40 p.m.)	72	70	65	59	49	61	64
ST-9: 60 feet from center of Reliez Valley Rd., West of Alhambra Valley Rd. (2/21/2014, 2:30-3:40 p.m.)	71	69	64	49	38	58	60

SOURCE: CITY OF MARTINEZ COMMUNITY NOISE SURVEY, 2014

Aviation Noise Levels-Buchanan Field Airport

The effects of aircraft operations at Buchanan Field have been of concern to residents of the airport environs and local government agencies since the 1980s. Contra Costa County is the agency that has jurisdictional authority over the airport and adopted a comprehensive noise abatement and compatibility program for the Buchanan Field Airport in the late 1980s, which was subsequently updated in 2008. This program was prepared under Part 150 of the Federal Aviation Regulations (FAR Part 150), which is designed to reduce existing non-compatible land uses around the airport and prevent the introduction of additional non-compatible uses. The program was adopted by the County to respond to

community concerns and noise complaints over individual aircraft operations, and is designed to eliminate noisier classes of aircraft from operating at the airport. The County sets maximum permitted noise levels for aircraft utilizing Buchanan Field, and provides enforcement and compliance provisions.

Noise exposure maps prepared and published in the 2008 Buchanan Field Airport Master Plan Update showed that existing 2005 noise levels up to 75 CNEL were experienced near the Airport. The Buchanan Field Airport Master Plan Update does not identify the Martinez area as containing existing noise sensitive land uses within the noise contours.

Railroad Noise

In 2009 a study was conducted by Illingworth & Rodkin to measure train noise near a grade crossing and the Amtrak station downtown where the train sounds its horn frequently. A Long-term noise measurement at location M-1 was made from 4:00 PM on January 26, 2009 to 2:00 PM on January 28, 2009. The noise measurement was located about 140 feet from the UPRR railroad tracks near Martinez Amtrak Station. This noise measurement location was about 175 feet south of the "at-grade" railroad crossing. Railroad train events, including train warning whistles, substantially increased noise levels at this location. Maximum instantaneous levels were typically 90 to 105 dBA L_{max}. Train warning horns and bus traffic at the bus station located about 400 feet from this noise measurement location were the major sources of environmental noise. Hourly average noise levels typically ranged from about 63 to 78 dBA L_{eq} during daytime hours and from about 45 to 75 dBA L_{eq} at night. Hourly average noise levels containing train events, especially during the nighttime, controlled the day-night average noise level calculated for the measurement period. The calculated day-night average noise level at location M-1 was 76 dBA L_{dn}.

Short-term (1-hour) daytime noise measurements at locations M-2 and M-3 were made to document the noise sources in the vicinity of the station. M-2 was located at a distance of about 540 feet south of the railroad tracks and about 5 feet above the ground. The dominant source of noise at this location during the measurement was bus traffic and intermittent train horns. The resulting hourly average noise level was 63 dBA L_{eq}. M-3 was at a distance of about 140 feet from the railroad tracks. The primary noise sources at this location were bus traffic in the station, train pass-bys, and intermittent train horns. The resulting hourly average noise level was 72 dBA L_{eq}.

The maximum noise level at M-1 was measured to be as high as 105 dBA as a result of railroad train warning horns. During the 1-hour observation on January 28, 2009, instantaneous maximum noise levels measured at 140 feet from the railroad tracks were about 76 dBA as a result of train horns while waiting at the station, and about 68 dBA during train pass-bys.

VIBRATION

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV) and another is the Root Mean Square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration. In the study done for this General Plan, a PPV descriptor with units of mm/sec or in/sec was used to evaluate construction generated vibration for building damage and human complaints. Table 3.11-3 displays the reactions of people and the effects on buildings that continuous vibration levels produce.

TABLE 3.11-3: REACTION OF PEOPLE AND DAMAGE TO BUILDINGS FROM CONTINUOUS OR FREQUENT INTERMITTENT VIBRATION LEVELS

VELOCITY LEVEL, PPV (IN/SEC)	HUMAN REACTION	EFFECT ON BUILDINGS
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground borne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground borne vibration levels. Because of the impulsive nature of such activities, the PPV descriptor has been routinely used to measure and assess ground borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

Railroad operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the RMS velocity level of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1 x 10-6 in/sec RMS, which equals 0 VdB, and 1 in/sec equals 120 VdB. Although not a universally accepted notation, the abbreviation "VdB" is used in this document for vibration levels in decibels to reduce the potential for confusion with airborne sound levels in decibels.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans (60 to 70 VdB). Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams and foot traffic. Construction activities, train operations, and heavy truck traffic are some of the most common external sources of vibration that can be perceptible inside residences. Table 3.11-4 illustrates some common sources of vibration and the association to human perception or the potential for structural damage.

TABLE 3.11-4: TYPICAL LEVELS OF GROUND BORNE VIBRATION

HUMAN/STRUCTURAL RESPONSE	VELOCITY LEVEL, VDB	TYPICAL EVENTS (50-FOOT SETBACK)
Threshold, minor cosmetic damage	100	Blasting, pile driving, vibratory compaction equipment Heavy tracked vehicles (Bulldozers, cranes, drill rigs)
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent events Residential annoyance, occasional events	80	Rapid transit, upper range Commuter rail, typical Bus or truck over bump or on rough roads

Residential annoyance, frequent events Approximate human threshold of perception to vibration	70	Rapid transit, typical Buses, trucks and heavy street traffic
Lower limit for equipment ultra-sensitive to vibration	50	Background vibration in residential settings in the absence of activity

Source: Transit Noise and Vibration Impact Assessment, US Department of Transportation Federal Transit Administration, May 2006.

3.11.2 REGULATORY SETTING

FEDERAL

Federal Highway Administration (FHWA)

The FHWA has developed noise abatement criteria that are used for federally funded roadway projects or projects that require federal review. These criteria are discussed in detail in Title 23 Part 772 of the Code of Federal Regulations (23CFR772).

Environmental Protection Agency (EPA)

The EPA has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, an Leq of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an Leq of 55 dBA and interior levels at or below 45 dBA. Although these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA has set 55 dBA Ldn as the basic goal for residential environments. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA Ldn, have generally agreed on the 65 dBA Ldn level as being appropriate for residential uses. At 65 dBA Ldn activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

Department of Housing and Urban Development (HUD)

HUD was established in response to the Urban Development Act of 1965 (Public Law 90-448). HUD was tasked by the Housing and Urban Development Act of 1965 (Public Law 89-117) “to determine feasible methods of reducing the economic loss and hardships suffered by homeowners as a result of the depreciation in the value of their properties following the construction of airports in the vicinity of their homes.”

HUD first issued formal requirements related specifically to noise in 1971 (HUD Circular 1390.2). These requirements contained standards for exterior noise levels along with policies for approving HUD-

supported or assisted housing projects in high noise areas. In general, these requirements established the following three zones:

- 65 dBA Ldn or less - an acceptable zone where all projects could be approved.
- Exceeding 65 dBA Ldn but not exceeding 75 dBA Ldn - a normally unacceptable zone where mitigation measures would be required and each project would have to be individually evaluated for approval or denial. These measures must provide 5 dBA of attenuation above the attenuation provided by standard construction required in a 65 to 70 dBA Ldn area and 10 dBA of attenuation in a 70 to 75 dBA Ldn area.
- Exceeding 75 dBA Ldn - an unacceptable zone in which projects would not, as a rule, be approved.

HUD's regulations do not include interior noise standards. Rather a goal of 45 dBA Ldn is set forth and attenuation requirements are geared towards achieving that goal. HUD assumes that using standard construction techniques, any building will provide sufficient attenuation so that if the exterior level is 65 dBA Ldn or less, the interior level will be 45 dBA Ldn or less. Thus, structural attenuation is assumed at 20 dBA. However HUD regulations were promulgated solely for residential development requiring government funding and are not related to the operation of schools or churches.

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise exposure of this type is dependent on work conditions and is addressed through a facility's or construction contractor's health and safety plan. With the exception of construction workers involved in facility construction, occupational noise is irrelevant to this study and is not addressed further in this document.

Federal Transit Administration

The Federal Transit Administration (FTA) has identified vibration impact criteria for sensitive buildings, residences, and institutional land uses near rail transit and railroads. The thresholds for residences and buildings where people normally sleep (e.g., nearby residences) are 72 VdB for frequent events (more than 70 events of the same source per day), 75 VdB for occasional events (30 to 70 vibration events of the same source per day), and 80 VdB for infrequent events (less than 30 vibration events of the same source per day). These criteria are summarized in Table 3.11-5.

TABLE 3.11-5: GROUNDBORNE VIBRATION IMPACT CRITERIA

LAND USE CATEGORY	GROUNDBORNE VIBRATION IMPACT LEVELS (VDB RE 1 µINCH/SEC, RMS)		
	FREQUENT EVENTS[1]	OCCASIONAL EVENTS[2]	INFREQUENT EVENTS[3]
Category 1 Buildings where vibration would interfere with interior operations.	65 VdB4	65 VdB4	65 VdB4

Category 2 Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3 Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes:
1. "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

SOURCE: U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT, MAY 2006, FTA-VA-90-1003-06.

STATE

California Department of Transportation (Caltrans) – Traffic Noise

Caltrans has adopted policy and guidelines relating to traffic noise as outlined in the Traffic Noise Analysis Protocol (Caltrans 1998b). The noise abatement criteria specified in the protocol are the same as those specified by FHWA.

California Department of Transportation (Caltrans) – Construction Vibration

There are no applicable State plans, policies, regulations, or laws related to ground-borne vibration from construction activities, but guidance developed by the California Department of Transportation (Caltrans) has been used in past construction vibration impact assessments of projects developed in San José. Caltrans uses a vibration limit of 12.7 mm/sec (0.5 inches/sec), PPV for buildings structurally sound and designed to modern engineering standards. A conservative vibration limit of 5 mm/sec (0.2 inches/sec), PPV has been used for buildings that are found to be structurally sound but structural damage is a major concern. For historic buildings or buildings that are documented to be structurally weakened, a conservative limit of 2 mm/sec (0.08 inches/sec), PPV is often used to provide the highest level of protection. All of these limits have been used successfully and compliance to these limits has not been known to result in appreciable structural damage. All vibration limits referred to herein apply on the ground level and take into account the response of structural elements (i.e., walls and floors) to ground-borne excitation.

Governor's Office of Planning and Research (OPR)

OPR has developed guidelines for the preparation of general plans (Office of Planning and Research, 1998). The guidelines include land use compatibility guidelines for noise exposure.

California Building Standards Code (CBSC)

The State of California establishes exterior sound transmission control standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings as set forth in the 2013 California Building Standards Code (Title 24, Part 2, Section 1207). Interior noise levels attributable to exterior environmental noise sources shall not exceed 45 dBA L_{dn} in any habitable room. When exterior noise levels (the higher of existing or future) where residential structures are to be located exceed 60 dBA L_{dn}, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the noise limit.

California Building Standards Code – Noise Insulation

The State establishes exterior sound transmission control standards for new hotels, motels, dormitories, apartment houses, and dwellings (other than detached single-family) as set forth in the 2013 California Building Code (Chapter 12, Section 1207). Dwelling units are required to be separated from one another or from public or service areas by walls, ceilings, and floors with a sound transmission class of not less than 50 for air-borne noise. Penetrations or openings for appliances and services shall be sealed, lined, insulated, or otherwise treated to maintain the required ratings.

LOCAL

City of Martinez General Plan

The adopted City of Martinez General Plan establishes goals and policies related to noise in the Noise Element.

Municipal Code Chapter 8.34 – Noise Control

Chapter 8.34 of the Municipal Code implements the City's adopted Noise Element. Chapter 8.34 establishes the City's mechanisms to control noise, including noise standards, noise regulations, exceptions, noise standards for new construction, a process for permits for excessive noise, and noise measurement techniques and provides for a noise control officer.

Section 8.34.020 establishes the following noise standards:

1. A day-night noise level (Ldn) of 45 dB is the standard for interior noise levels. An Ldn of 45 dBA is achieved by an allowable interior noise level of 35 dBA between 10 p.m. — 7 a.m. and 45 dBA between 7 a.m. — 10 p.m.

2. A day-night level (Ldn) of 60 dB is the standard for exterior noise. An Ldn of 60 dBA is a maximum noise level of 50 dBA between 10 p.m. — 7 a.m. and 60 dBA between 7 a.m. — 10 p.m.

The City's noise regulations prohibit excessive noise and also prohibit certain noises and noise-causing activities before 7 a.m. and after 7 p.m. on weekdays, except holidays.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the project will have a significant impact related to noise if it will result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies,
    - A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the Municipal Code. The noise exposure is considered acceptable up to 60 dBA L_{dn} for exterior uses. For interior noise, a significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed 45 dBA L_{dn}.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project,
    - A significant permanent increase would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. Following standard practice, a substantial increase would occur if existing plus project noise levels would be 3 dBA L_{dn} or greater above existing conditions if resulting noise levels would exceed those considered compatible for the land use (60 dBA L_{dn} for single family residences) or if existing plus project noise levels would be 5 dBA L_{dn} or greater above existing conditions if resulting noise levels would continue to meet those considered compatible for the land use;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels within two miles of a public airport or public use airport; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels; or
- Exposure of persons to or generation of excessive groundborne vibration levels.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Traffic noise associated with the General Plan Update could expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (Significant and Unavoidable)

To describe future noise levels due to traffic, the Noise Element identified future traffic noise levels and noise contour locations for the year 2040. Exhibit 3.11-11 below displays the predicted traffic noise levels for major roadways throughout the Planning Area. As shown in Exhibit 3.11-11 and Table 3.11-6, noise levels on major roadways throughout the Planning Area are predicted to increase. The increase in noise levels is associated with additional traffic on the local roadway network under buildout of the proposed General Plan Update.

As shown in Table 3.11-6, traffic noise levels would result in increases of up to 4 $dB(A)_{LDN}$ at locations 75 feet of study roadways with implementation of the General Plan. While most roadways would result in changes of 2 $dB(A)_{LDN}$ or less, noise levels along Escobar Street (Alhambra to Court Street), Marina Vista Ave (Court Street to Escobar Street), Pacheco Boulevard (Arthur Road to Route 4), and Shell Avenue (Marina Vista Avenue to Pacheco Boulevard) would increase by 3 $dB(A)_{LDN}$ and noise levels along Marina Vista Ave (Alhambra Avenue to Court Street) and Shell Avenue (Pine Street to Alhambra Avenue) would increase by 4 $dB(A)_{LDN}$.

Thus, implementation of the proposed General Plan Land Use Map would contribute to an increase in significance in traffic noise levels and could result in significant increases in traffic noise levels at existing sensitive receptors. The Noise Element of the proposed General Plan contains various policies and implementation measures to reduce noise impacts throughout the Planning Area. Specifically, Goal N-G-4 calls for reduced noise from traffic. Policy N-P-4.1 supports the use of quieter pavement to be included in new developments whenever possible. N-P-4.2 ensures vehicle amplification systems are not heard within 50 feet or more of the vehicle. N-P-4.3 supports the control of excessive exhaust noise. N-I-4.3a ensures the enforcement of Section 27002 and 27150 of the California Motor Vehicle Code when noises from vehicles and or exhaust are deemed to exceed allowable limits. Policy N-P-1.1 ensures implementation of the City's interior and exterior noise level standards for noise-sensitive areas of new uses affected by transportation-related noise. N-I-1.1a requires the evaluation of new development proposals for compliance with the City's noise standards, and where necessary, requires preparation of a noise study to determine compliance. N-P-2.1 ensures the City maintains a pattern of land uses that separates noise-sensitive land uses from major traffic noise sources, to the extent feasible.

EXHIBIT 3.11-11: 2040 TRAFFIC NOISE CONTOURS

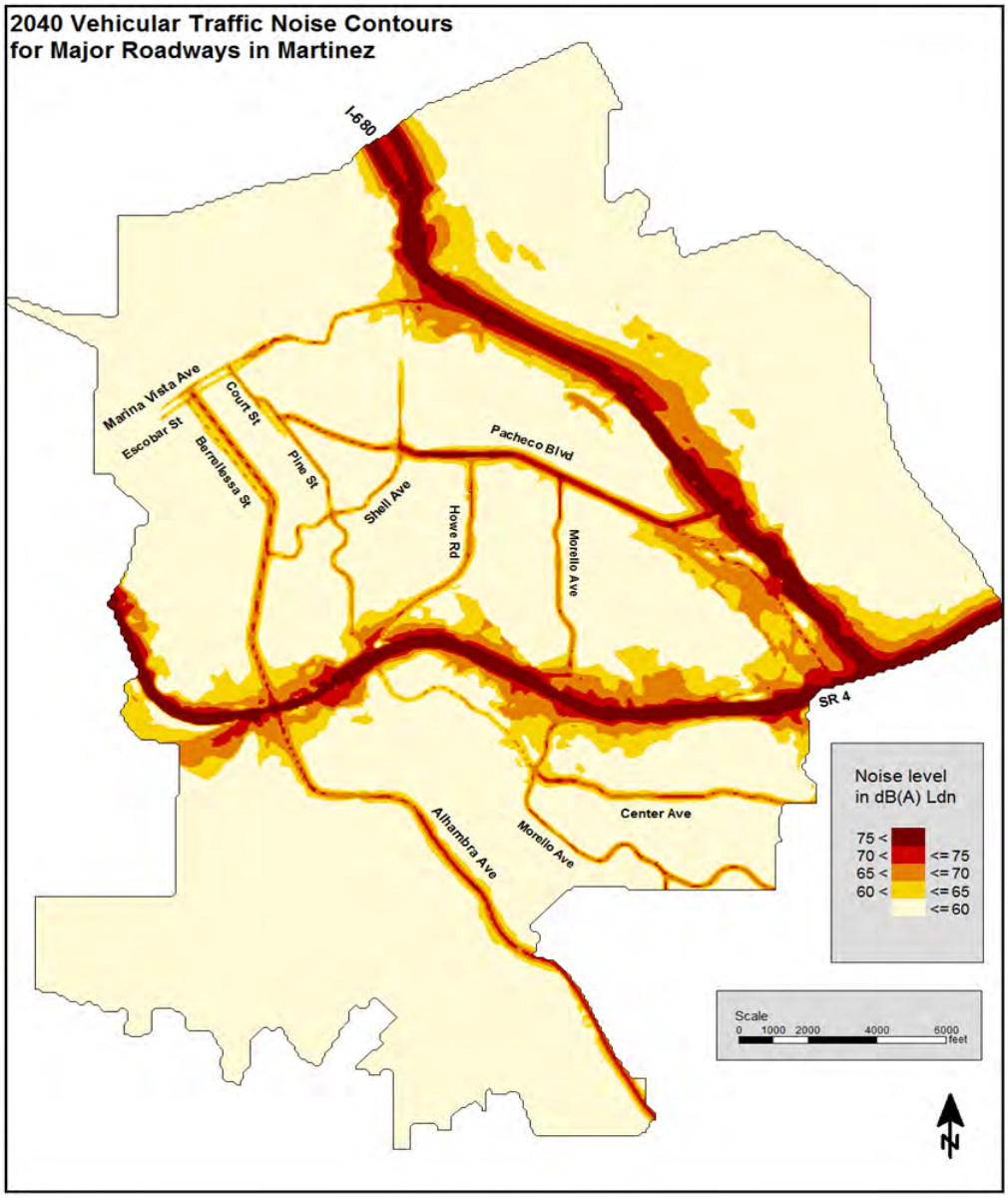


TABLE 3.11-6: EXISTING AND FUTURE MODELED NOISE LEVELS ALONG ROADWAYS

ROADWAY SEGMENT	DB (A) LDN AT 75 FEET		
	EXISTING	CUMULATIVE 2040	CHANGE
Alhambra Ave, Rt 4 to Alhambra Valley Rd	65	66	1
Alhambra Ave, Alhambra Valley to Blue Ridge Dr	68	68	-
Alhambra Ave, Escobar St to Shell Ave/D St	65	66	1
Alhambra Ave, Shell Ave/D St to Rt 4	65	66	1
Arnold Dr, Morello Ave to I-680	66	68	2
Arnold Dr, Howe Rd to Morello Ave	68	70	2
Berrellessa St, Escobar St to Alhambra Ave	57	59	2
Center Ave, Morello Ave to Pacheco Blvd/I680	64	65	1
Center Ave, Rt 4 to Morello Ave	60	50	-10
Court St, Escobar St to Pine St	57	59	2
Court St, south of Pine St	56	58	2
EB Rt 4, west of Alhambra Ave	72	72	-
Escobar St, Alhambra Ave to Court St	55	58	3
Escobar St, Court St to Marina Vista Ave	57	59	2
Howe Rd, south of Pacheco Blvd	65	66	1
Marina Vista Ave, Alhambra Ave to Court St	55	59	4
Marina Vista Ave, Court St to Escobar St	63	66	3
Marina Vista Ave, Escobar St to Shell Ave	60	60	-
Marina Vista Ave, Shell Ave to I-680	67	68	1
Morello Ave, Pacheco Blvd to Rt 4	63	64	1
Morello Ave, Rt 4 to Center Ave	63	64	1
Morello Ave, south of Center Ave	59	60	1
Muir Rd, east of Morello Ave	58	60	2
Muir Rd, west of Morello Ave	71	73	2
NB I-680, Marina Vista Ave to Pacheco Blvd	71	73	2
NB I-680, north of Marina Vista Ave	83	85	2
Pacheco Blvd, Arthur Rd to Rt 4	63	66	3
Pacheco Blvd, Morello Ave to I-680	70	71	1
Pacheco Blvd, Pine St to Shell Ave	64	65	1
Pine St, Court St to Pacheco Blvd	60	62	2
Pine St, Pacheco Blvd to Shell Ave	60	62	2
Pine St, Shell Ave to Howe Rd	62	63	1
Shell Ave, Marina Vista Ave to Pacheco Blvd	59	62	3
Shell Ave, Pine St to Alhambra Ave	58	62	4

SOURCE: ILLINGWORTH & RODKIN, 2014

As indicated by the Noise Background Report, predicted future conditions traffic related noise levels under buildout of the General Plan Land Use Map are predicted to increase. The Noise Element of the proposed General Plan contains various goals, policies, and implementation measures that when implemented will reduce noise impacts throughout the Planning Area. While implementation of the proposed policies and actions of the General Plan will reduce noise and land use compatibility impacts from vehicular traffic noise sources and would ensure that new development is designed to include noise-attenuating features, some traffic noise impacts cannot be mitigated to a less-than-significant level due the proximity of sensitive receivers to major roadways, and because noise attenuation may not be feasible in all circumstances. There would be a significant increase in ambient noise levels with buildout of the General Plan as shown in Table 3.11-6. The proposed General Plan would have a ***significant and unavoidable*** impact relative to traffic noise.

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

Policy N-P-1.1 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by transportation-related noise are as follows:

Maximum Noise Levels for New Uses Affected by Traffic Noise

NEW LAND USE	*OUTDOOR ACTIVITY AREAS -- LDN*	*INTERIOR SPACES-LDN/PEAK HOUR LEQ1*	*NOTES*
All Residential	*60-65*	*45*	*2, 3, 4*
Transient Lodging	*65*	*45*	*5*
Hospitals & Nursing Homes	*60*	*45*	*6*
Theaters & Auditoriums	*—*	*35*	
Churches, Meeting Halls, Schools, Libraries, etc.	*60*	*40*	
Office Buildings	*65*	*45*	*7*
Commercial Buildings	*65*	*50*	*7*
Playgrounds, Parks, etc.	*70*	*—*	
Industrial	*65*	*50*	*7*

1. *For traffic noise within Martinez, Ldn and peak-hour Leq values are estimated to be approximately similar. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.*
2. *Outdoor activity areas for single-family residential uses are defined as backyards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.*
3. *For multi-family residential uses, and for mixed-use projects that include residential units, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts.*
4. *Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn or less using a practical application of the best-available noise reduction measures, an exterior noise level of up*

to 65 dB Ldn may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

5. *Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas.*
6. *Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*
7. *Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.*

Implementation

N-I-1.1a *Evaluate new development proposals for compliance with the above-noted standards. Where necessary, the City may require preparation of a noise study to determine compliance.*

N-I-3a *Require and adhere to feasible engineering noise control measures identified as mitigation measures in Environmental Impact Reports or mitigated negative declarations on proposed projects be incorporated prior to project occupancy.*

N-I-3b *When appropriate and feasible, implement actions, such as quiet zones to reduce the impacts of train noise near Downtown and use best available or practical control technology to minimize noise.*

N-I-3c *Continue working collaboratively with transportation, County, and other agencies to reduce noise from existing and future facilities by considering noise reduction strategies related to design and location of the facilities.*

Policy

N-P-2.1 *Maintain a pattern of land uses that separates noise-sensitive land uses from major traffic noise sources, to the extent feasible.*

N-P-2.2 *New development should be site planned and architecturally designed to minimize and mitigate indoor and exterior noise and noise impacts on neighboring uses where feasible.*

N-P-2.5 *Discourage the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other, when possible.*

N-P-2.6 *Discourage land use patterns and traffic patterns that expose sensitive noise receptors (hospitals, schools, churches, senior care uses, etc.) to noise levels that exceed noise standards and the City's the Noise Control Ordinance.*

N-P-2.7 *Use open space, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances.*

N-P-2.8 *Protect parks and recreational areas from excessive noise to permit the enjoyment of sports and other leisure time and recreational activities.*

Policy

N-P-4.1 *Select quieter pavement that also meets other criteria established by City pavement standards.*

Implementation

N-I-4.1a *During selection of pavement contracts and new development select quieter pavement types whenever possible.*

Policy

N-P-4.2 *Control the sound of vehicle amplification systems so that noise is not heard within 50 feet or more of the vehicle.*

N-P-4.3 *Control excessive exhaust noise.*

Implementation

N-I-4.3a *Enforce Section 27002 and 27150 of the California Motor Vehicle Code when noises from vehicles and or exhaust are deemed to exceed allowable limits.*

Impact 3.11-2: Stationary noise sources associated with the General Plan Update could expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies or result in a substantial permanent or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)

Implementation of the proposed project could result in the future development of land uses that generate noise levels in excess of applicable City noise standards for non-transportation noise sources. Such land uses may include commercial area loading docks, industrial uses, HVAC equipment, car washes, daycare facilities, auto repair, as well as recreational uses. While the General Plan does not specifically propose any new noise generating uses, the project does allow development and redevelopment in accordance with the Land Use Map, which may result in new noise sources and could expose sensitive uses to elevated noise levels. New projects which may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields may create noise levels in excess of the City's standards.

The proposed General Plan includes policies and actions that are intended to reduce noise associated with stationary noise sources. Policy N-P- 1.2 sets maximum interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation related noise. N-P-2.1 ensures a pattern of land uses that separates noise-sensitive land uses. N-P-2.2 supports new development to be site planned and architecturally designed to minimize and mitigate indoor and exterior noise and noise impacts on neighboring uses where feasible. N-P-2.5 discourages the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other, when possible. N-P-2.6 discourage a land use patterns and traffic patterns that expose sensitive noise receptors (hospitals, schools, churches, senior care uses, etc.) to noise levels that exceed noise standards and the City's the Noise Control Ordinance. N-P-2.7 supports the use of open space, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances. N-P-2.8 requires the protection of parks and recreational areas from excessive noise to permit the enjoyment of sports and

other leisure time and recreational activities. N-P-1.4 requires new development to be responsible for compliance with City noise standards. N-P-3.3 recommends the use of noise mitigating devices, such as sound wall barriers, landscaping, earth berms, sound walls, mufflers, sound traps, baffles, and/or other noise reduction techniques as conditions of development approval to reduce noise intrusion from transportation and fixed sources. N-I-3a requires adherence to feasible engineering noise control measures identified as mitigation measures in Environmental Impact Reports or mitigated negative declarations on proposed projects be incorporated prior to project occupancy.

All future development projects would be required to comply with policies and implementation measures required by the General Plan. Implementation of the General Plan policies and implementation measures would reduce noise associated with stationary noise sources through a range of measures and approaches. These noise-related policies include requirements for the preparation of project-specific noise studies, compliance with adopted City standards and thresholds for interior and exterior noise level exposure, the use of mitigation measures and techniques to reduce noise exposure, and land use compatibility standards. Implementation of the following noise goals, policies, and implementation measures of the proposed General Plan will reduce noise impacts from stationary noise sources to a **less than significant** level.

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

N-I-1.4a *New development shall comply with City noise standards.*

N-P- 1.2 *The interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation related noise are as follows:*

Maximum Noise Levels for New Uses Affected by Non-Transportation Noise

NEW LAND USE	*OUTDOOR ACTIVITY AREA - LEQ*		*INTERIOR - LEQ*	*NOTES*
	DAYTIME	*NIGHT-TIME*	*DAY & NIGHT*	
All Residential	*50*	*45*	*35*	*1, 2, 7*
Transient Lodging	*55*	*—*	*40*	*3*
Hospitals & Nursing Homes	*50*	*45*	*35*	*4*
Theaters & Auditoriums	*—*	*—*	*35*	
Churches, Meeting Halls, Schools, Libraries, etc.	*55*	*—*	*40*	
Office Buildings	*55*	*—*	*45*	*5, 6*
Commercial Buildings	*55*	*—*	*45*	*5, 6*
Playgrounds, Parks, etc.	*65*	*—*	*—*	*6*
Light Industry	*65*	*65*	*50*	*5*

1. *Outdoor activity areas for single-family residential uses are defined as backyards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.*
2. *For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts. Where such areas are not provided, the standards shall be applied at individual patios and balconies of the development.*
3. *Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas, and are not commonly used during nighttime hours.*
4. *Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*
5. *Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.*
6. *The outdoor activity areas of office, commercial and park uses are not typically utilized during nighttime hours.*
7. *It may not be possible to achieve compliance with this standard at residential uses located immediately adjacent to loading dock areas of commercial uses while trucks are unloading. The daytime and nighttime noise level standards applicable to loading docks shall be 55 and 50 dB Leq, respectively.*

   General: The Table standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

Implementation

N-I-2.1a *Evaluate new development proposals for compliance with the above-noted standards. Where necessary, the City may require preparation of a noise study to determine compliance.*

Policy

N-P-1.3 *Any City-required acoustical analysis shall be prepared according to specific standards and practices.*

Implementation

N-I-1.3a *An acoustical analysis may be required by the City for development projects that are deemed to possibly result in violation of the noise standards outlined in Policies N-1.1 and N-1.2, above, either in terms of a noise impact created by the new development that could affect nearby properties, or if the new development may be impacted by existing noise sources in the community. Additionally, a noise analysis may be required regarding project proximity to noise sensitive receptors.*

Where an acoustical analysis is required by the City, it shall be prepared in accordance with the following provisions:

- *Applicant has the financial responsibility (with the study to be administered by the City).*
- *Must be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.*
- *Include representative noise-level measurements with sufficient sampling periods and locations to adequately describe local conditions.*
- *Estimate existing and projected (cumulative) noise levels in terms of City noise standards.*
- *Recommend appropriate project-level noise mitigation measures. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms evaluating possible sleep disturbance.*
- *Estimate interior and exterior noise exposure after the prescribed mitigations are implemented.*
- *Describe the post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigations.*

Policy

N-P-1.4 *New development shall comply with City noise standards rather than requiring noise mitigation measures.*

Implementation

N-I-1.4a *New development shall comply with City noise standards.*

Implementation

N-I-1.5b *Consider an update to the City's Noise Ordinance, consistent with the standards and policies contained in the General Plan.*

Policy

N-P-2.1 *Maintain a pattern of land uses that separates noise-sensitive land uses from major traffic noise sources, to the extent feasible.*

N-P-2.2 *New development should be site planned and architecturally designed to minimize and mitigate indoor and exterior noise and noise impacts on neighboring uses where feasible.*

N-P-2.5 *Discourage the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other, when possible.*

N-P-2.7 *Use open space, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances.*

N-P-2.8 *Protect parks and recreational areas from excessive noise to permit the enjoyment of sports and other leisure time and recreational activities.*

N-P-3.3 *Recommend the use of noise mitigating devices, such as sound-attenuating paving on streets, wall barriers, landscaping, earth berms, sound walls, mufflers, sound traps,*

baffles, and/or other noise reduction techniques as conditions of development approval to reduce noise intrusion from transportation and fixed sources.

Implementation

N-I-3a *Require and adhere to feasible engineering noise control measures identified as mitigation measures in Environmental Impact Reports or mitigated negative declarations on proposed projects be incorporated prior to project occupancy.*

N-I-3c *Continue working collaboratively with transportation, County, and other agencies to reduce noise from existing and future facilities by considering noise reduction strategies related to design and location of the facilities.*

Impact 3.11-3: The General Plan would not expose people residing or working in the project area to excessive noise levels within two miles of a public airport or public use airport. (Less than Significant)

The effects of aircraft operations at Buchanan Field have been of concern to residents of the airport area, and local government agencies since the 1980s. Contra Costa County is the agency that has jurisdictional authority over the airport and adopted a comprehensive noise abatement and compatibility program for the Buchanan Field Airport in the late 1980s, which was subsequently updated in 2008. This program was prepared under Part 150 of the Federal Aviation Regulations (FAR Part 150), which is designed to reduce existing non-compatible land uses around the airport and prevent the introduction of additional non-compatible uses. The program was adopted by the County to respond to community concerns and noise complaints over individual aircraft operations, and is designed to eliminate noisier classes of aircraft from operating at the airport. The County sets maximum permitted noise levels for aircraft utilizing Buchanan Field, and provides enforcement and compliance provisions.

Noise exposure maps prepared and published in the 2008 Buchanan Field Airport Master Plan Update showed that existing 2005 noise levels up to 75 CNEL were experienced near the airport. The Buchanan Field Airport Master Plan Update does not identify the Martinez area as containing existing noise sensitive land uses within the noise contours.

However, Implementation of the proposed project would result in the creation of new noise-sensitive land uses within the Buchanan Field noise contours.

Noise associated with aircraft overflights is also of concern when evaluating aircraft noise effects in terms of land use compatibility. Single-event noise is the maximum sound level produced by an individual approach overflight at a specific location, often described in terms of Lmax, which is the maximum sound level recorded for each event. A different measurement of single-event noise, also commonly used when evaluating aircraft noise, is the SEL. The SEL describes the event's mean energy level over the duration of the noise event. As would be expected, single-event noise levels for aircraft overflights within the Planning Area would be greatest and most frequent near the airport's primary flight paths. The majority of mapped noise contours associated with Buchanan Field are located outside of the City and SOI, however, a small portion of the 65 CNEL contour is located north of SR 4. Proposed

uses within the City's SOI that would be affected by the 65 CNEL contour are undeveloped land designated G by the Land Use Map. Implementation Measure N-I-1.3a would require an acoustical analysis for future development projects that are deemed to possibly result in violation of the noise standards, either in terms of a noise impact created by the new development that could affect nearby properties, or if the new development may be impacted by existing noise sources in the community. Additionally, Implementation Measure N-P-1.4 requires compliance with City noise standards to rests with new development, rather than forcing noise mitigation measures upon existing uses. Therefore, any proposed development within the Buchanan Field noise contour would be required to comply with the above noise standards.

Additionally, the proposed General Plan includes goals, policies, and implementation measures intended to reduce airport noise impacts throughout the City. Policy N-P-2.3 is intended to minimize the noise impacts of air flight paths over the City, including the impacts of helicopter flight paths related to operation of regional hospitals. N-I-2.3a requires cooperation with Buchanan Airfield to promote a fly neighborly program to minimize noise results from low altitude general aircraft over Martinez. N-I-2.3b supports cooperation with surrounding and area jurisdictions and hospitals to reduce the impact of helicopter takeoffs, landings and over-flights in Martinez. N-P-2.1 ensures a pattern of land uses that separates noise-sensitive land uses from major traffic noise sources. N-P-2.2 supports site plans and architecturally designed that minimize and mitigate indoor and exterior noise and noise impacts on neighboring uses. N-P-2.5 discourages the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other, when possible.

The proposed General Plan includes goals, policies, and implementation measures intended to reduce airport noise impacts throughout the City. These include land use compatibility standards, and policies that require new development projects to conform to the City's interior and exterior noise level standards. With the implementation of the following General Plan goals, policies and implementation measures, noise impacts relative to airports would be **less than significant.**

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

N-I-1.4a	*New development shall comply with City noise standards.*
N-P-2.1	*Maintain a pattern of land uses that separates noise-sensitive land uses from major traffic noise sources, to the extent feasible.*
N-P-2.2	*New development should be site planned and architecturally designed to minimize and mitigate indoor and exterior noise and noise impacts on neighboring uses where feasible.*
N-P-2.3	*Minimize the noise impacts of air flight paths over the City, including the impacts of helicopter flight paths related to operation of regional hospitals.*
N-P-2.5	*Discourage the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other, when possible.*

N-P-2.6 *Discourage land use patterns and traffic patterns that expose sensitive noise receptors (hospitals, schools, churches, senior care uses, etc.) to noise levels that exceed noise standards and the City's the Noise Control Ordinance.*

N-P-2.7 *Use open space, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances.*

N-P-2.8 *Protect parks and recreational areas from excessive noise to permit the enjoyment of sports and other leisure time and recreational activities.*

Implementation

N-I-1.3a *An acoustical analysis may be required by the City for development projects that are deemed to possibly result in violation of the noise standards outlined in Policies N-1.1 and N-1.2, either in terms of a noise impact created by the new development that could affect nearby properties, or if the new development may be impacted by existing noise sources in the community. Additionally, a noise analysis may be required regarding project proximity to noise sensitive receptors.*

N-I-2.3a *Work with Buchanan Airfield to promote a fly neighborly program to minimize noise results from low altitude general aircraft over Martinez.*

N-I-2.3b *Work with surrounding and area jurisdictions and hospitals to reduce the impact of helicopter takeoffs, landings and over-flights in Martinez.*

Impact 3.11-4: Construction noise associated with the General Plan could result in substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Significant and Unavoidable)

New development, maintenance of roadways, installation of public utilities and infrastructure generally require construction activities. These activities include the use of heavy equipment and impact tools. Table 3.11-7 provides a list of the types of equipment which may be associated with construction activities, and their associated noise levels.

Table 3.11-7: Construction Equipment Noise

Type of Equipment	Predicted Noise Levels, L_{max} dB				Distances to Noise Contours (feet)	
	Noise Level at 50'	Noise Level at 100'	Noise Level at 200'	Noise Level at 400'	70 dB L_{max} contour	65 dB L_{max} contour
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792

Pneumatic Tools	85	79	73	67	281	500
Pile Driver	101	95	89	83	1,174	3,155

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Activities involved in construction would typically generate maximum noise levels ranging from 90 to 101 dB at a distance of 50 feet, with the highest noise levels generated by activities such as pile driving. Pile driving activities also generate sound levels that travel considerably further distances than other construction activities, as indicated in the noise contour data in Table 3.11-7. Construction could result in periods of significant ambient noise level increases and the potential for annoyance.

The proposed General Plan includes policies and actions that are intended to reduce noise associated with construction activities. Specifically, Policy N-P-2.2 would reduce noise impacts from construction activities and is supported by implementation measures N-I-2.2a, which considers amendment of the City's Noise Control Ordinance to address appropriate hours of construction and shall be implemented in all construction projects unless an exemption is first obtained from the City in response to special circumstances, and N-I-2.2b, which requires all internal combustion engines used in conjunction with construction to be muffled according to the equipment manufacturer's requirements.

Additionally, Martinez Municipal Code, Chapter 8.34.030 limits the hours of operation for noise-producing construction equipment. The operation of pile drivers, steam shovels, and pneumatic hammers used in construction, demolition, or other repair work, is prohibited before 7:00 a.m. or after 7:00 p.m. Monday through Friday, and before 9:00 a.m. or after 5:00 p.m. on Saturdays, Sundays, and State, Federal, or local holidays.

Compliance with Martinez Municipal Code, Chapter 8.34.030, which limits the hours of operation for noise-producing construction equipment and compliance with the policies included in the General Plan related to construction noise will reduce noise impacts throughout the Planning Area. However, even with implementation of the above-referenced measures to reduce construction noise, there remains the potential for future development and redevelopment projects to generate temporary construction noise in excess of City standards, which may cause temporary nuisance noise impacts to adjacent land uses. As such, this impact is considered **significant and unavoidable**, and no additional feasible mitigation is available that would reduce this impact to a less than significant level.

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

N-P-2.2 *Reduce noise impacts from construction activities.*

Implementation

N-I-2.2a *Consider amendment of the City's Noise Control Ordinance to address appropriate hours of construction which shall be implemented in all construction projects unless an exemption is first obtained from the City in response to special circumstances.*

N-I-2.2b *All internal combustion engines used in conjunction with construction shall be muffled according to the equipment manufacturer's requirements.*

Impact 3.11-5: Construction vibration associated with the project could expose of persons to or result in generation of excessive groundborne vibration levels (Less than Significant with Mitigation)

The primary vibration-generating activities associated with future development and redevelopment activities facilitated by the proposed project would occur during construction when activities such as grading, pile driving, utilities placement, and parking lot construction occur. Construction activities may generate perceptible vibration when heavy equipment or impact tools (e.g., jackhammers, hoe rams, pile drivers) are used. Construction activities often include demolition of existing structures, excavation, site preparation work, foundation work, and new building framing and finishing.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for buildings structurally sound and designed to modern engineering standards.

Table 3.11-8 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Construction activities such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet.

TABLE 3.11-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT		PPV AT 25 FT. (IN/SEC)	APPROXIMATE LV AT 25 FT. (VDB)
Pile Driver (Impact)	upper range	1.158	112
	Typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT, UNITED STATES DEPARTMENT OF TRANSPORTATION, OFFICE OF PLANNING AND ENVIRONMENT, FEDERAL TRANSIT ADMINISTRATION, MAY 2006.

Table 3.11-8 data indicate that construction vibration levels anticipated for typical project construction are less than the 0.2 in/sec p.p.v. threshold of damage to buildings and less than the 0.1 in/sec threshold of annoyance criteria at distances of 100 feet. Most project construction would likely occur at distances greater than 100 feet from sensitive receptors.

However, projects that require the use of pile drivers may result in vibration levels that exceed the vibration threshold of 0.5 in/sec p.p.v., which has the potential for damage to existing buildings and annoyance to sensitive receptors could occur at distances less than 100 feet. Therefore, this impact would be considered **potentially significant**.

The General Plan Noise Element includes Policy N-P-3.1 that encourages the preparation of ground borne vibration studies by qualified professionals when construction activities include vibration sensitive uses and significant site grading, foundation work, or underground work.

However, future projects may result in vibration levels that exceed the vibration threshold of 0.5 in/sec p.p.v., which has the potential for damage to existing buildings and annoyance to sensitive receptors could occur at distances less than 100 feet. Therefore, this impact would be considered **potentially significant.** The following mitigation measure shall be added as a policy to the City of Martinez General Plan Noise Element. Implementation of the following mitigation measure would ensure that potential impacts associated with vibration during construction activities are reduced to a **less than significant** level.

Mitigation Measure Noise-1: *Update the City of Martinez General Plan to include the following policy language.*

Projects shall be designed and implemented to reduce adverse construction vibration impacts to sensitive receptors, as feasible, when vibration-related construction activities are to occur within 100 feet or less from existing sensitive receptors. Measures to reduce noise and vibration effects may include, but are not limited to:

- *Phase demolition, earth-moving and ground-impacting operations so as not to occur in the same time period.*
- *The pre-existing condition of all buildings within a 100-foot radius will be recorded in order to evaluate damage from construction activities. Fixtures and finishes within a 100-foot radius of construction activities susceptible to damage will be documented (photographically and in writing) prior to construction. All damage will be repaired back to its pre-existing condition.*
- *Substituting vibration-generating equipment with equipment or procedures that would generate lower levels of vibration. For instance, in comparison to impact piles, drilled piles or the use of a sonic or vibratory pile driver are preferred alternatives where geological conditions would permit their use.*

- *Other specific measures as they are deemed appropriate by the implementing agency to maintain consistency with adopted policies and regulations regarding vibration.*

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

N-P-3.1 *Encourage the preparation of ground borne vibration studies by qualified professionals when construction activities include vibration sensitive uses and significant site grading, foundation work, or underground work.*

Impact 3.11-6: The General Plan could expose persons to railroad noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Significant and Unavoidable)

The Union Pacific and BNSF rail lines will carry freight traffic and the Amtrak provides commuter rail usage. Measured railroad noise levels ranged from a maximum of 105 dBA due to train warning horns, while noise levels approximately 140 feet from the tracks were about 76 dBA as a result of train horns and about 68 dBA during train pass-bys. The General Plan Update does not propose an increase in rail traffic, but could result in new or redeveloped noise sensitive uses in the vicinity of the rail lines. These uses could be exposed to excessive noise levels during train pass-bys and when train warning horns are sounded.

The General Plan Update includes policies and implementation measures that are intended to reduce exposure to excessive noise levels. Policy N-P-1.1 establishes interior and exterior noise level standards for noise-sensitive areas of new uses affected by transportation-related noise. Implementation measures N-I-1.1a requires new development proposals to be evaluated for compliance with the standards established by Policy N-P-1.1 and implementation measure N-I-1.3a provides for the City to require an acoustical analysis for development projects that may result in violation of the established noise standards. Policy N-P-2.1 would maintain a pattern of land uses that separates noise-sensitive land uses, such as residential, from major traffic noise sources to the extent feasible. Implementation measure N-I-3b encourages actions such as quiet zones to reduce impacts of train noise near Downtown and also encourage the use of best available or practical technology to minimize noise.

Implementation of these General Plan policies and actions would reduce rail noise impacts to the greatest extent feasible. However, existing uses and development allowed under the proposed General Plan would expose sensitive receptors to noise associated with railroad operations including warning horns in excess of the City's established standards. Therefore this is considered a **significant and unavoidable** impact, and no additional feasible mitigation is available that would reduce this impact to a less than significant level.

GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Noise Element

Policy

Policy N-P-1.1 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by transportation-related noise are as follows:

Maximum Noise Levels for New Uses Affected by Traffic Noise

NEW LAND USE	OUTDOOR ACTIVITY AREAS -- LDN	INTERIOR SPACES-LDN/PEAK HOUR LEQ1	NOTES
All Residential	60-65	45	2, 3, 4
Transient Lodging	65	45	5
Hospitals & Nursing Homes	60	45	6
Theaters & Auditoriums	—	35	
Churches, Meeting Halls, Schools, Libraries, etc.	60	40	
Office Buildings	65	45	7
Commercial Buildings	65	50	7
Playgrounds, Parks, etc.	70	—	
Industrial	65	50	7

1. *For traffic noise within Martinez, Ldn and peak-hour Leq values are estimated to be approximately similar. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.*
2. *Outdoor activity areas for single-family residential uses are defined as backyards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.*
3. *For multi-family residential uses, and for mixed-use projects that include residential units, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts.*
4. *Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.*
5. *Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas.*
6. *Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*
7. *Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.*

N-P- 1.2 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation related noise are as follows:

Maximum Noise Levels for New Uses Affected by Non-Transportation Noise

New Land Use	*Outdoor Activity Area - Leq*		*Interior - Leq*	*Notes*
	Daytime	*Night-Time*	*Day & Night*	
All Residential	*50*	*45*	*35*	*1, 2, 7*
Transient Lodging	*55*	*—*	*40*	*3*
Hospitals & Nursing Homes	*50*	*45*	*35*	*4*
Theaters & Auditoriums	*—*	*—*	*35*	
Churches, Meeting Halls, Schools, Libraries, etc.	*55*	*—*	*40*	
Office Buildings	*55*	*—*	*45*	*5, 6*
Commercial Buildings	*55*	*—*	*45*	*5, 6*
Playgrounds, Parks, etc.	*65*	*—*	*—*	*6*
Light Industry	*65*	*65*	*50*	*5*

8. *Outdoor activity areas for single-family residential uses are defined as backyards. For large parcels or residences with no clearly defined outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.*
9. *For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas or tennis courts. Where such areas are not provided, the standards shall be applied at individual patios and balconies of the development.*
10. *Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas, and are not commonly used during nighttime hours.*
11. *Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*
12. *Only the exterior spaces of these uses designated for employee or customer relaxation have any degree of sensitivity to noise.*
13. *The outdoor activity areas of office, commercial and park uses are not typically utilized during nighttime hours.*
14. *It may not be possible to achieve compliance with this standard at residential uses located immediately adjacent to loading dock areas of commercial uses while trucks are unloading. The daytime and nighttime noise level standards applicable to loading docks shall be 55 and 50 dB Leq, respectively.*

General: The Table standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

Policy

N-P-1.3 *Any City-required acoustical analysis shall be prepared according to specific standards and practices.*

Implementation

N-I-1.1a *Evaluate new development proposals for compliance with the above-noted standards. Where necessary, the City may require preparation of a noise study to determine compliance.*

N-I-1.3a *An acoustical analysis may be required by the City for development projects that are deemed to possibly result in violation of the noise standards outlined in Policies N-1.1 and N-1.2, above, either in terms of a noise impact created by the new development that could affect nearby properties, or if the new development may be impacted by existing noise sources in the community. Additionally, a noise analysis may be required regarding project proximity to noise sensitive receptors.*

Where an acoustical analysis is required by the City, it shall be prepared in accordance with the following provisions:

- *Applicant has the financial responsibility (with the study to be administered by the City).*
- *Must be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.*
- *Include representative noise-level measurements with sufficient sampling periods and locations to adequately describe local conditions.*
- *Estimate existing and projected (cumulative) noise levels in terms of City noise standards.*
- *Recommend appropriate project-level noise mitigation measures. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms evaluating possible sleep disturbance.*
- *Estimate interior and exterior noise exposure after the prescribed mitigations are implemented.*
- *Describe the post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigations.*

N-I-2.1a *Evaluate new development proposals for compliance with the above-noted standards. Where necessary, the City may require preparation of a noise study to determine compliance.*

N-I-3b *When appropriate and feasible, implement actions, such as quiet zones to reduce the impacts of train noise near Downtown and use best available or practical control technology to minimize noise.*

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The purpose of this EIR section is to identify if the proposed Housing Element would impact the City by inducing substantial population growth, or result in the removal of people or housing.

The primary information in this section is based on information provided by the following reference materials: *Plan Bay Area* (ABAG 2013); U.S Census 2000 and 2010 Population and Housing Estimates for Cities, Counties, and the State; the *Housing Element (*City of Martinez 2015); *Zoning* – Title 22 of the Martinez Municipal Code; the *Downtown Specific Plan* (City of Martinez 2005); the *Alhambra Valley Specific Plan Annexation* (City of Martinez 2012 and Contra Costa County 1992); and the Department of Finance E-5 Population and Housing Report 2014 and 2015 estimates.

3.12.1 ENVIRONMENTAL SETTING

DEMOGRAPHICS

POPULATION TRENDS

The population of Martinez continues to grow at a similar rate as the surrounding cities of Pleasant Hill and Concord, but at a slower rate than Contra Costa County. Population growth from 2000 to 2015 is shown in Table 3.12-1.

TABLE 3.12 -1: POPULATION GROWTH

	2000	2010	2015	CHANGE FROM 2000-2015
Population				
Martinez	35,866	35,824	37,384	4.23%
Pleasant Hill	32,837	33,152	34,162	4.04%
Concord	121,780	122,067	126,069	3.52%
Contra Costa County	948,816	1,049,025	1,102,871	16.24%

SOURCES: 2000 AND 2010 U.S. CENSUS; DEPARTMENT OF FINANCE, 2015.

HOUSEHOLDS

Table 3.12-2 summarizes the household trends for the City of Martinez, Contra Costa County, and the surrounding cities of Pleasant Hill and Concord between 2000 and 2015. The number of households within the City of Martinez has increased from 14,300 in 2000 to 15,151 in 2015, representing an increase of 5.95 percent from 2000 to 2015.

TABLE 3.12 -2: HOUSEHOLDS

	2000	2010	2015	CHANGE FROM 2000-2015
Households				
Martinez	14,300	14,287	15,151	5.95%
Pleasant Hill	13,753	13,708	14,329	4.19%
Concord	44,020	44,278	47,170	7.16%
Contra Costa County	344,129	375,364	382,883	11.26%

SOURCES: 2000 AND 2010 U.S. CENSUS; DEPARTMENT OF FINANCE, 2015.

HOUSEHOLD SIZE

The average household size in the City of Martinez is 2.49, representing a 2.89 percent increase from 2000 and 2010. Table 3.12-3 summarizes household sizes for the City of Martinez, Contra Costa County, and the Neighboring cities of Pleasant Hill and Concord from 2000 through 2015.

TABLE 3.12 -3: HOUSEHOLD SIZE

	2000	2010	2015	CHANGE FROM 2000-2015
HOUSEHOLD SIZE				
Martinez	2.42	2.42	2.49	2.89%
Pleasant Hill	2.35	2.38	2.46	4.68%
Concord	2.74	2.73	2.81	2.55%
Contra Costa County	2.72	2.77	2.85	4.78%

SOURCES: 2000 AND 2010 U.S. CENSUS; DEPARTMENT OF FINANCE, 2015.

HOUSING UNITS

The number of housing units in Martinez has increased at a slower rate than population increases. Currently there are approximately 15,072 housing units in the City. The majority of the housing units in the City are single family detached homes, which account for 62.9 percent of all housing units. The remaining housing types include single family attached units (14.1 percent), duplexes through fourplexes (8.8 percent), multifamily apartments with five or more units (14.1 percent), and mobile homes (0.1 percent). Vacancy rates in Martinez have remained low (4.6 percent) from 2010 through 2014. (avaccency rate of five percent is generally considered indicative of a balanced housing market). The optimal homeowner vacancy rate for a City or county will fall within the range of two to four percent of the totaloccupied housing units, while the optimal rental vacancy rate usually falls between five to six percent. Martinez's vacancy rates reveal that the City is below the optimal rates. [1]

In Contra Costa County, housing units have increased at a slightly faster pace, with a 1.39 percent increase from 2010 to 2014. However the countywide vacancy rate is higher (6.2 percent). The mix of housing stock in Martinez is broadly similar to the County, with a slightly higher proportion of single family attached units, and a slightly lower proportion of building with five or more units. This comparison is shown below in Table 3.12-4.

TABLE 3.12-4: HOUSING UNITS

	2010		2014		2010-2014
MARTINEZ	NUMBER	PERCENT	NUMBER	PERCENT	PERCENT CHANGE
Single Detached	9,391	62.7%	9,487	62.9%	
Single Attached	2,123	14.2%	2,123	14.1%	

[1] Martinez Adopted Housing Element (2015)

Two to Four	1,325	8.8%	1,325	8.8%	
Five Plus	2,122	14.2%	2,122	14.1%	
Mobile Homes	15	0.1%	15	0.1%	
Total Units	**14,976**		**15,072**		**0.64%**
Vacancy Rate		4.6%		4.6%	
CONTRA COSTA COUNTY					
Single Detached	266,693	66.6%	270,316	66.6%	
Single Attached	31,594	7.9%	31,678	7.8%	
Two to Four	28,482	7.1%	28,482	7.0%	
Five Plus	66,120	16.5%	66,120	16.3%	
Mobile Homes	7,374	1.8%	7,374	1.8%	
Total Units	**400,263**		**405,828**		**1.39%**
Vacancy Rate		6.2%		6.2%	

SOURCE: CALIFORNIA DEPARTMENT OF FINANCE, 2010 AND 2014 E-5 HOUSING ESTIMATES.

VACANCY RATE

As shown above in Table 3.12-4, the vacancy rate of housing units in the City is 4.6 percent.

AGE OF HOUSING STOCK

Within the City of Martinez, residential development trends have slowed since 1990. The greatest amount of residential development within the City took place between 1970 through 1989. Throughout this 20-year period, roughly 50 percent on the City's housing stock was established. Table 3.12-5 summarizes the age of the City's housing stock.

TABLE 3.12-5: AGE OF HOUSING STOCK, CITY OF MARTINEZ

YEAR STRUCTURE BUILT	NUMBER OF UNITS	PERCENTAGE OF HOUSING STOCK
2010 to 2013	73	0.5%
2000 to 2009	509	3.4%
1990 to 1999	1086	7.1%
1980 to 1989	3,437	22.6%
1970 to 1979	4,221	27.8%
1960 to 1969	1,820	12.0%
1950 to 1959	1,413	9.3%
1940 to 1949	863	5.7%
1939 or Earlier	1,768	11.6%
Total Units	**15,190***	

** U.S. CENSUS TOTAL MARGIN OF ERROR EQUALS +/- 529 UNITS*
SOURCE: U.S. CENSUS 2011-2013 AMERICAN COMMUNITY SURVEY

GROWTH PROJECTIONS

As part of the regional planning effort the Association of Bay Area Governments (ABAG) has identified growth projections within the Bay Area including the Martinez Planning Area. As shown in Table 3.12-6, ABAG projects the Martinez population to rise to 38,800 residents by 2030, a 3.79 percent increase over the next 15 years. By comparison, ABAG anticipates that Contra Costa County will experience an 11.02 percent increased during the same period.

TABLE 3.12-6: POPULATION GROWTH PROJECTIONS

	YEAR		% INCREASE
	2015	2030	2015-2030
Martinez	37,384	38,800	3.79%
Contra Costa County	1,102,871	1,224,400	11.02%

SOURCE: DEPARTMENT OF FINANCE E-5 ESTIMATES AND ABAG PROJECTIONS 2013

3.12.2 REGULATORY SETTING

STATE

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The State determines the fair-share allocated to each region. The share is known as the Regional Housing Needs Allocation (RHNA). The RHNA for the Bay Area is based on a Regional Housing Needs Plan (RHNP) developed by the local council of government. ABAG is the lead agency for developing the RHNP for a nine-county area that includes Contra Costa County and the City of Martinez. The City's RHNA that covers the period from mid-2007 through 2014 includes 1,060 units. The City's RHNA for 2014 through 2022 includes 469 units. In developing the method for distributing the regional housing needs, ABAG gave increased weight to areas along major transit corridors and where there are a high number of existing jobs as well as employment growth. The new method is intended to allocate fewer units to outlying areas to reduce development pressures on agricultural lands and areas further from job centers. This new approach has resulted in a lower "fair share" housing need for Martinez (reduced from 1,341 units during the 1999-2006 planning period to 1,060 units during the 2007-2014 planning period and 469 units during the 2014-2022 planning period).[2] Table 3.12-7 summarizes Martinez's RHNA from 2007 through 2014, and 2014 through 2022 by income level.

TABLE 3.12-7: CITY OF MARTINEZ REGIONAL HOUSING NEEDS ALLOCATION

	2007-2014		2014-2022	
INCOME LEVEL	UNITS	PERCENT	UNITS	PERCENT
Very Low (0-50% AMI)	261	25%	124	26%
Low (51-80% AMI)	166	16%	72	15%

[2] http://www.abag.ca.gov/planning/housingneeds/pdfs/Final%20RHNA%20(2014-2022).pdf

Moderate (81-120% AMI)	179	17%	78	17%
Above Moderate (120%+AMI)	454	43%	195	42%
Total	**1,060**		**469**	

SOURCE: ASSOCIATION OF BAY AREA GOVERNMENTS RHNA (2013).

Transportation 2035 Plan

The *Transportation 2035 Plan* (MTC 2009) is the most recently adopted Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) for the San Francisco Bay Area region. The *Transportation 2035 Plan* specifies how some $218 billion in anticipated Federal, State, and local transportation funds will be spent in the nine-county Bay Area during the next 25 years. Consistency with applicable air quality plans is demonstrated through the *Transportation Air Quality Conformity Analysis for the Transportation 2035 Plan* (MTC 2009), which was prepared using population forecasts for each local jurisdiction as inputs into the regional travel demand model.

California Relocation Assistance Act

The California Relocation Assistance Act (Government Code Section 7260 et seq.) establishes uniform policies to provide for the fair and equitable treatment of people displaced from their homes or businesses as a direct result of state and/or local government projects or programs. The California Relocation Assistance Act requires that comparable replacement housing be made available to displaced persons within a reasonable period of time prior to the displacement. Displaced persons or businesses are assured payment for their acquired property at fair market value. Relocation assistance in the form of advisory assistance and financial benefits would be provided at the local level. This includes aid in finding a new home location, payments to help cover moving costs, and additional payments for certain other costs.

LOCAL

Measure J

Measure J, approved by Contra Costa County voters in November 2004, provides for the continuation of a half-cent transportation sales tax until 2034. The funds generated from the tax will be used for projects and programs as set forth in the voter-approved Expenditure Plan. Measure J requires each jurisdiction in Contra Costa County to comply with all of the following components of its Growth Management Program:

- Adopt a Growth Management Element;
- Adopt a Development Mitigation Program;
- Participate in a Cooperative, Multi-Jurisdictional Planning Process to Reduce Cumulative Regional Traffic Impacts of Development;
- Address Housing Options;
- Develop a Five-Year Capital Improvement Program;
- Adopt a Transportation Systems Management Ordinance or Resolution; and

- Adopt an Urban Limit Line. Cities that do not adopt a ULL default to the voter-approved Countywide ULL, adopted under Measure C in 1990. Note: The City adopted the ULL.

City of Martinez General Plan

The adopted City of Martinez General Plan addresses population and housing in the Housing, Growth Management, and Land Use Elements.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on population and housing if it will:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: General Plan implementation has the potential to induce substantial population growth (Less than Significant)

This EIR evaluates the maximum projected development that could occur within the existing City Limits and SOI if land in the City developed at or near the higher end of densities and intensities allowed under the proposed General Plan. The proposed General Plan accommodates future growth in Martinez, including new businesses, expansion of existing businesses, and new residential uses. Infrastructure and services would need to be extended to accommodate future growth.

Table 2-3 in Section 2.0 summarizes the maximum level of new development that may occur within the existing City Limits and SOI under General Plan build out conditions. Build out of the proposed General Plan could yield up to 2,900 new residential units and over 1.2 million square feet of new non-residential development in the City limits and SOI.

This new growth would increase the City's population by approximately 7,105 residents.[3] The full development of the new commercial, office, and industrial uses shown in Table 2-3 would increase

[3] Based on the 2013 California Department of Finance estimated household size of 2.45 persons per household.

the employment opportunities by approximately 2,390 employees.[4]Full build out of the proposed General Plan Land Use Map within the City limits and SOI would result in a maximum total population of approximately 44,270 by 2035. Depending on growth rates, the actual growth during the life of the General Plan could differ, but should not exceed the theoretical build out described in Section 2.0.

Given the historical and current population, housing, and employment trends, growth in the City, as well as the entire state is inevitable. The primary factors that account for population growth are natural increase, and net migration. The average annual birth rate (total number of live births per 1,000) for California in 2013 was 13.1. Additionally, California is expected to attract roughly one-third of the country's immigrants (Pew Research Center 2014). Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and transportation. While these factors would likely result in growth in Martinez during the planning period of the proposed General Plan, growth will continue to occur based primarily on the demand of the housing market and demand for new commercial, industrial, and other non-residential uses.

As future development occurs under the proposed General Plan, new roads, infrastructure, and services would be necessary to serve the development, and this infrastructure would accommodate planned growth. Goal PCU-G-7 ensures that the City continues to provide water service to residents by maintaining water infrastructure, and working with the Contra Costa Water District (CCWD), Central Contra Costa Sanitary District (CCCSD) and Mt. View Sanitary District (MVSD), so that demand for existing and future residents can be met. Policy PCU-P-7.1 that supports cooperation with the CCWD, CCCSD and MVSD to ensure water demands can be met for existing and future residents supports this goal. Furthermore, the City has adopted a Growth Management Element to ensure that future growth will be adequately accommodated. Goal GM-G-1 ensures the management of the City growth and protects open space by establishing and maintaining an Urban Limit Line (ULL). GM-G-2 ensures that adequate infrastructure and facilities, including new and improved pedestrian, bicycle, parking and transit facilities, are provided to meet future demands of new development and population growth. GM-G-3 establishes collaboration in on-going multi-jurisdictional transportation planning programs, such as, the Regional Transportation Planning Committee (RTPC) and CCTA that reflect the nature of the County's land use and circulation system by focusing on facilities that serve regional travel demand, in order to create a balanced, safe and efficient transportation system and to manage the impacts of growth. Goal GM-G-4 ensures the City makes reasonable progress towards providing housing opportunities for all income levels and demonstrate reasonable progress in meeting housing goals, and is supported by Policy GM-P-4.1 that ensures the City prepare a biennial report on the implementation of actions outlined in the Housing Element, for submittal to CCTA as part of the biennial GMP Compliance Checklist. The report will demonstrate reasonable progress using one of the following three options:

[4] Assumes one employee generated for: every 549 square feet of commercial space, every 324 square feet of office space, and every 557 square feet of industrial space.

a. Compare the number of housing units approved, constructed or occupied within the jurisdiction over the preceding five years with the number of units needed on average each year to meet the housing objectives established in the Housing Element; or

b. Illustrating how the City has adequately planned to meet the existing and projected housing needs through the adoption of land use plans and regulatory systems which provide opportunities for, and do not unduly constrain housing development; or

c. Illustrating how the City's General Plan and zoning regulations facilitate the improvement and development of sufficient housing to meet those objectives.

Growth under the proposed General Plan would remain within the general growth levels projected statewide, and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. The proposed General Plan is intended to accommodate the City's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, and based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every five to eight years).

The proposed General Plan includes goals and policies that mitigate environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality effects. Additionally, this Draft EIR includes mitigation measures, where appropriate, to reduce or eliminate potentially significant impacts associated with specific environmental issues associated with growth. Sections 3.1 through 3.16 and 4.0 provide a discussion of environmental effects associated with development allowed under the proposed General Plan.

With implementation of General Plan policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and the goal and policy framework. The proposed General Plan would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with the proposed General Plan would result a **less than significant** impact.

GENERAL PLAN GOALS POLICIES AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Parks Community Facilities and Utilities Element

Goals

PCUG-7 *Continue to provide water service to residents by maintaining our water infrastructure and work with Contra Costa Water District (CCWD), Central Contra Costa Sanitary District (CCCSD), Contra Costa County Sanitation District #6 (SD-6), and Mt. View Sanitary District (MVSD) so that demand for existing and future residents can be met.*

Policies

PCU-P-7.1 *Continue working with CCWD, CCCSD, SD-6, and MVSD to ensure the demand can be met for existing and future residents.*

Growth Management Element

Goals

GM-G-1 *Manage the City's Growth and Protect Open Space by Establishing and Maintaining an Urban Limit Line (ULL). Apply a voter approved Urban Limit Line (ULL) consistent with the requirements of the Measure J Growth Management Program (GMP), either as mutually voted on Countywide, or relating solely to Martinez. The ULL can only be amended by a subsequent vote of the electorate; minor adjustments of less than 30 acres may be approved by the City Council as provided for by the Measure J GMP.*

GM-G-2 *Provide adequate infrastructure and facilities, including new and improved pedestrian, bicycle, parking and transit facilities, to meet future demands of new development and population growth.*

GM-G-3 *Participate in on-going multi-jurisdictional transportation planning programs, such as with other agencies, the Regional Transportation Planning Committee (RTPC) and CCTA that reflect the nature of the County's land use and circulation system by focusing on facilities that serve regional travel demand, in order to create a balanced, safe and efficient transportation system and to manage the impacts of growth.*

GM-G-4 *Make reasonable progress in providing housing opportunities for all income levels and demonstrate to CCTA reasonable progress in meeting housing goals.*

Policies

GM-P-4.1 *Prepare a biennial report on the implementation of actions outlined in the Housing Element, for submittal to CCTA as part of the biennial GMP Compliance Checklist. The report will demonstrate reasonable progress using one of the following three options:*

a. Compare the number of housing units approved, constructed or occupied within the jurisdiction over the preceding five years with the number of units needed on average each year to meet the housing objectives established in the Housing Element; or

b. Illustrating how the City has adequately planned to met the existing and projected housing needs through the adoption of land use plans and regulatory systems which provide opportunities for, and do not unduly constrain housing development; or

c. Illustrating how the City's General Plan and zoning regulations facilitate the improvement and development of sufficient housing to meet those objectives.

Impact 3.12-2: General Plan implementation does not have the potential to displace substantial numbers of people or existing housing (less than significant)

While the proposed General Plan does not directly propose any development, it would allow for the development and redevelopment of lands within the City in areas that are both currently

occupied, and unoccupied by people and existing housing units. The adopted 2015Housing Element identifies vacant and underutilized parcels within the City that could accommodate new housing. Future housing development within the City will consist of developing vacant parcels, and increased densities of underutilized parcels to meet future needs and housing goals. The proposed General Plan would accommodate approximately 2,900 new housing units in the City limits and SOI (1,842 Single Family units, and 1,058 Multi-Family units). As most of the new development would occur through infill, new mixed-use development, and development of vacant parcels, it is not anticipated that substantial numbers of housing or people would be displaced, and that the General Plan Update, therefore, would not require the construction of replacement housing. Future growth will be channeled into development areas, which are identified in the Housing Element as the most suitable locations for higher density residential and mixed-use development projects. Additionally, the City's Housing Element Policy 2.4 discourages the loss of housing units and the conversion of residential uses to non-residential uses, unless there is a finding of public benefit and that equivalent housing can be provided for those who have been displaced by the proposed conversion.

The proposed General Plan includes goals and policies that mitigate environmental impacts associated with growth, including following logical development patterns, and the protection of existing neighborhoods. Therefore impacts of the proposed General Plan on the displacement of people or housing are considered **less than significant**.

This section provides a background discussion and analysis of fire protection services, police services, schools, parks and recreational facilities, libraries, and other community facilities and services. This section is organized with an existing setting, regulatory setting, and impact analysis.

Utilities services, including water, sewer, and solid waste disposal are addressed in Section 3.16 of this Draft EIR.

3.13.1 EXISTING CONDITIONS

FIRE PROTECTION SERVICES

The Contra Costa County Fire Protection District (CONFIRE), provides fire and emergency medical services to nine cities (including Martinez), and the unincorporated areas, serving a population of 600,000 across a 254 square-mile area with 25 fire stations. The CONFIRE is a well-equipped full-service fire agency, which provides service to business, residents, and industry, including several petroleum refineries and chemical manufacturing plants. CONFIRE serves many area communities including: Walnut Creek, Pleasant Hill, Concord, Pacheco, Martinez, Clayton, Lafayette, Clyde, Briones, El Sobrante, San Pablo, Antioch, Pittsburg, and Bay Point. CONFIRE was originally formed by the merger of the Central Fire Protection District and the Mt. Diablo Fire Protection District in December of 1964. The Martinez Fire Department became part of the Contra Costa County Fire Protection District on July 1, 1968, after passage of Measure F.

EMERGENCY SERVICES DIVISION

The largest division within CONFIRE is the Emergency Services (Operations) Division. It is responsible for emergency medical services (EMS), fire suppression, rescue, hazardous conditions, and all other emergency and non-emergency calls for service. The Operations Division provides "All Risk" emergency and non-emergency services to the community. Services include emergency response to:

- Fires: structure, vegetation, vehicles, miscellaneous
- Medical and Traumatic Emergencies: medical emergencies, vehicle accidents, traumatic injuries, multi-casualty incidents
- Vehicle Rescue: disentanglement and extrication
- Technical Rescue: low- and high-angle, confined space, trench, and water rescue
- Hazardous Materials: spills, leaks, releases at fixed facilities and at rail/roadway incidents
- Hazardous Conditions: electric and natural gas emergencies, flooding, etc.
- Special Operations: preparedness and response to seismic events, petrochemical plants, airports, mass transit, terrorism, marine fires and emergencies, etc.

The Operations Division is responsible for ensuring that the citizens are served through an efficient and effective system of services designed to protect life, environment, and property. Part of this system includes staffing and maintaining 24 fire stations located in all of the CONFIRE's major regions (including two stations within Martinez).

Approximately 70 percent of the calls for service are responses to medical emergencies, and rescues. Calls related to structure fires total roughly one percent of the overall responses. The remaining calls range from hazardous material responses, to public assist requests.

There are 12 Battalion Chiefs assigned to the Operations Division. Ten shift Battalion Chiefs lead and manage four battalions on three shifts. Two Battalion Chiefs lead and manage the Training Division and the Emergency Medical Services Division.

The Operations Division staffs 19 engine companies, five truck companies, and a Shift Training Captain / Safety Officer daily. Minimum daily staffing is 77 personnel. On-duty companies are trained and regularly cross-staff with numerous specialty response units including 18 wildland fire apparatus, three rescue units, a trench rescue unit, a fire rescue boat, and a mobile breathing air support unit. The Operations Division responded to over 26,000 calls-for-service from July 2013 to July 2014.

Each fire protection district earns a rating from the Insurance Service Office (ISO). This rating, known as a Public Protection Classification (PPC), is utilized by many insurance providers to calculate insurance premiums within the district. Ratings range from 1 to 10. Class 1 generally represents superior property fire protection, and Class 10 indicates that the area's fire-suppression program does not meet ISO's minimum criteria.

The PPC ratings are calculated on the following factors:

- Fire alarm and communication systems, including telephone systems, telephone lines, staffing, and dispatching systems;
- The fire department, including equipment, staffing, training, and geographic distribution of fire companies; and,
- The water-supply system, including the condition and maintenance of hydrants, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires.

CONFIRE, presently has an ISO rating of three within the incorporated urban areas, while the unincorporated areas lacking hydrant infrastructure have an ISO rating of nine.

TRAINING AND EDUCATION DIVISION

The Training and Education Division is responsible for the delivery of training programs for the professional development of CONFIRE employees. The Division prepares the employees to provide an effective response force to mitigate emergencies and potential emergencies. The Training and Education Division is responsible for the training and the continued education of the District's

uniformed and non-uniformed personnel. It develops and provides district-wide training for new recruits, probationary, and permanent employees.

CONFIRE maintains a Training and Education Center on 12 acres of land located at 2945 Treat Blvd. in Concord, California. The site is centrally located in the CONFIRE district with good freeway and main arterial road access. The Center contains six offices, four audio visual equipped classrooms each capable of handling 40 students, video development/ editing and media room, a reinforced concrete 50 foot open balcony drill tower, and an open space area utilized for trench rescue and wildland fire training.

The Training Center was designed to improve fire-rescue training programs for firefighters within the District. It also allows CONFIRE to provide superior fire-rescue training programs and accessibility to outside public and private entities from within the County. The Center is designed to accommodate a wide range of training programs to benefit law enforcement, EMS, public/private corporations, and community and civic groups.

FIRE PREVENTION BUREAU

The Fire Prevention Bureau exists to provide the highest level of fire prevention through public education, inspection, code enforcement, and detailed plan review to ensure that properties and buildings are properly constructed in accordance with local and state requirements. Fire Prevention Bureau personnel provide communities with the most updated information available to safely maintain homes and places of business from fire and hazards.

The Fire Prevention Bureau provides in-depth services to citizens who live or work in the cities of Antioch, Clayton, Concord, Lafayette, Martinez, Pleasant Hill, Pittsburg, San Pablo, Walnut Creek, including the unincorporated communities of North Alamo, Bay Point, Clyde, East Richmond Heights, El Sobrante, Montalvan Manor, North Richmond, Pacheco, and Tara Hills. The Fire Prevention Bureau also serves the East Contra Costa Fire District under contract, providing fire prevention services for the cities of Brentwood, Oakley and the unincorporated communities of Bethel Island, Byron, and Discovery Bay.

Under the direction of the Fire Marshal, the Fire Prevention Bureau has five main divisions: Fire Investigation, Code Enforcement and Inspection, Engineering and Plan Review, Public Education, and Exterior Hazard Control. CONFIRE works closely with local building officials to ensure that construction projects are reviewed for fire and life safety impacts.

PUBLIC EDUCATION DIVISION

The Public Education Division of CONFIRE is responsible for providing the public with information and resources to prevent not only fires, but also to reduce or prevent injuries and death from causes unrelated to fire. CONFIRE's Public Education Unit provides Fire and Life Safety education to children and adults throughout the district, and administers several programs including: Smoke Detector Give-Always, Juvenile Fire Intervention, and Safety Fairs.

Fire Stations

CONFIRE currently operates 25 fire stations within its service area, as shown in Table 3.13-1 and on Figure 3.13-1.

Table 3.13-1: CONFIRE Stations

STATION LOCATION	
Station 1: 1330 Civic Dr. Walnut Creek	Station 2: 2012 Geary Road. Pleasant Hill
Station 3: 1520 Rossmoor Pkwy. Walnut Creek	Station 4: 700 Hawthorne Dr. Walnut Creek *
Station 5: 205 Boyd Rd. Pleasant Hill	Station 6: 2210 Willow Pass Rd. Concord
Station 7: 1050 Walnut Ave. Walnut Creek	Station 8: 4647 Clayton Rd. Concord
Station 9: 209 Center Ave. Pacheco	Station 10: 2955 Treat Blvd. Concord
Station 11: 6500 Center Ave. Clayton *	Station 12: 1240 Shell Ave. Martinez *
Station 13: 251 Church St. Martinez	Station 14: 521 Jones St. Martinez
Station 15: 3338 Mt Diablo Blvd. Lafayette	Station 16: 4007 Los Arabis Dr. Lafayette *
Station 17: 620 St Mary's Rd. Lafayette	Station 18: 145 Sussex St. Clyde
Station 19: 1019 Garcia Ranch Rd. Briones	Station 22: 5050 Crystyl Ranch Pkwy. Concord
Station 69: 4640 Appian Way. El Sobrante	Station 70: 13928 San Pablo Ave. San Pablo
Station 81: 315 W 10th. Antioch	Station 82: 196 Bluerock Dr. Antioch
Station 83: 2717 Gentrytown Dr. Antioch	Station 84: 1903 Railroad Ave. Pittsburg
Station 85: 2331 Loveridge Rd. Pittsburg	Station 86: 3000 Willow Pass Rd. Bay Point
Station 87: 800 W Leland Rd. Pittsburg *	Station 88: 4288 Folsom Dr. Antioch

* indicates stations that have recently been closed as of 2013

The City of Martinez is served primarily by Station 13 located at 251 Church St, near Pleasant Hill Road, and Station 14 located at 521 Jones Street. As of 2013, Station 12 located at 1240 Shell Ave in Martinez was closed due to fiscal concerns.

Stations 13 and 14 are operated by a three-person company, including one Captain, one Engineer, and one Firefighter, with one of the three being a paramedic. CONFIRE's response-time goal for fire calls is five minutes or less 90 percent of the time; however, CONFIRE does not currently meet industry standards or best practices for staffing levels, response times, assembly of an effective firefighting force, or number of specialty units, e.g. truck companies. CONFIRE's 90th percentile response time was 8:30 minutes in 2007. The District's median response time was 5:23 minutes. When first response by AMR and automatic aid are considered, the 90th percentile response time was 7:57 minutes and the median was 5:07 minutes. Response times were somewhat faster in Walnut Creek, Concord and Clayton, and somewhat slower in Martinez, Lafayette and in west Pittsburg. [1]

[1] Municipal Service Review: 2009. Fire and Emergency Medical Fire and Emergency Medical Service Providers

The impact of decommissioning four full service fire companies was 6 second and 18 second longer response times for EMS and fire calls, respectively. The response time changes are relatively insignificant.

CONFIRE receives ongoing revenues from existing and new developments that come mainly from property tax revenues. Roughly 13 percent of property tax revenue comes from the City of Martinez.[2] New developments are required to pay fees to CONFIRE for plan review and inspection services. The fees are charged at the time of the plan review. These fees do not provide a significant revenue source for CONFIRE according to their budgets.

POLICE PROTECTION SERVICES

The Martinez Police Department provides law enforcement and police protection services throughout the city. The Police Department is a full service law enforcement agency that is charged with the enforcement of local, State, and Federal laws, and with providing 24-hour protection of the lives and property of the public. The Police Department functions both as an instrument of public service and as a tool for the distribution of information, guidance, and direction. The Police Department is responsible for providing law enforcement services in the city, including patrol, dispatch, crime prevention, parking and traffic control, community policing, community awareness, and investigations. The Police Department has a Special Weapons and Tactics (SWAT) Team, a K-9 unit, a temporary holding facility, and conducts training. Martinez PD is also involved in the East Bay Regional Communication System, the Contra Costa Mobile Field Force, the regional crime lab, and the Sheriff's Automated Regional Information Exchange System database. The Police Department relies on the Sheriff's Office for search and rescue services and long-term holding facilities, County Animal Control for animal services, and the City of Walnut Creek for bomb squad services. The Sheriff's Department also provides safety services within the city by responding to a City of Martinez "critical incident" in which a request has been made for "mutual aid."

The Police Department provides services to approximately 37,165 residents covering roughly 12 square miles. The Police Department has 47 employees including 34 police officers and another 13 civilian officers.[3] Per the City's FY 14-15 budget, the PD has 53 authorized full time equivalent (FTE) positions of which 38 are sworn officers and 15 are support personnel. Previously, the Department had been divided into two divisions: Administrative Services, and Field Operations. Each division was managed by a Commander that reported to the Chief. The Administrative Services Bureau included the records, dispatch, community services, and investigation functions. The Field Operations Division was responsible for patrol and calls for service. In June of 2011, the Police Chief restructured the Department and consolidated the two divisions into one Operations and

[2] Contra Costa County MSR. Table 7-4: ConFire Property Tax Shares, FY 07-08

[3] Federal Bureau of Investigation. 2012 Crime Statistics. Available At: http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012

Service Division commanded by a Police Captain. The two commander positions and an administrative Sergeant's position were eliminated to create two Police Lieutenant positions. The Police Department then established Neighborhood Policing Areas (NPAs) in which a police officer is assigned to each of the 24 NPAs to facilitate direct contact with residents or businesses within the NPA. The two Lieutenants each oversee two patrol teams and provide accountability to the NPA initiative.

FIELD OPERATIONS AND SERVICES DIVISION

The Police Department patrols 12.3 square miles that are divided into four beats. The city is divided into two patrol sectors, (north and south) with two beats in each sector. The Police Department utilizes solo officer units on patrol and uses reserves and overtime pay to maintain critical staffing as required based upon calls for services data captured by its automated CAD and records management system. The recently initiated Neighborhood Policing Areas (NPAs) insures that a patrol officer is designated for each of the 24 NPAs. Four Sergeants are assigned to oversee six NPAs each.

Crimes by Category in Martinez

Statistics on the number of crimes by category of crime in Martinez during each year (2006, 2008, 2010, 2012, 2013, and 2014) as reported by the Federal Bureau of Investigation (FBI) Criminal Justice Information Services Division, and the State of California Department of Justice Office of the Attorney General are shown in Table 3.13-2 below.

Table 3.13-2: Crimes by Category Martinez (2006-2014)

CATEGORY	2006	2008	2010	2012	2013	2014
Violent Crimes	98	105	73	70	53	73
Homicide	0	3	1	1	0	2
Forcible Rape	12	11	6	9	3	5
Robbery	23	32	25	18	17	30
Aggravated Assault	63	59	41	42	33	36
Property Crimes	1,273	1,131	847	930	824	974
Burglary	222	262	196	174	202	189
Larceny-Theft	830	881	521	567	441	593
Vehicle Theft	221	188	130	189	181	192
Arson	0	0	0	0	0	0

SOURCE: Federal Bureau of Investigation, Criminal Justice Information Services Division, Offenses Known to Law Enforcement Tables, Martinez CA. (2006, 2008, 2010, And 2012), and State of California Department of Justice Office of the Attorney General CJSC Statistics: Crimes (2013 and 2014).

As shown in Table 3.13-2, the majority of crimes committed in Martinez consist of non-violent property crimes, primarily larceny-theft.

Service Demand

The Police Department averaged 28,200 service calls per year in 2007, 2008, and 2009, which is 787 service calls per 1,000 residents. By comparison, service providers countywide averaged 1,500 service calls per 1,000 residents during the same time period. The City reported that it has particularly high demand during weekdays when there is an influx of approximately 20,000 additional people into Martinez. Other special events that increase service demand include Fourth of July, the Peddlers Fair, and the King of the County BBQ—each of which draw an additional 3,000 to 5,000 people.

Police Response Times

Response times are an important benchmark of police service. Response times can vary greatly depending on the size of the city and department, geographical location, and levels of crime. Calls for service are prioritized into two general categories.

- Priority 1 calls involve an immediate threat to life or crimes that are in progress.
- Priority 2 calls are high priority but do not elevate to the level of an emergency.

The average response time for Priority One Response calls for police services in Martinez in 2014 was 6:32 from the time a dispatcher receives a call. From the time an officer is dispatched, the arrival time was 4:05.

To offset new demands for police services the City of Martinez charges an Impact/Mitigation Fee for new development. The fee is utilized by the Police Department to purchase new facilities and equipment as necessary to service new development. The current fee for police impacts is $411 per single-family and multi-family residential unit; $0.39 per square foot of retail space, and $0.05 per square foot of office and industrial space.

SCHOOLS

The Martinez Unified School District (MUSD) serves over 4,000 students in grades K-12 and operates four elementary schools (grades K-5), one middle school (grades 6-8), one high school (grades 9-12), two alternative/independent study schools, and one adult education school. Additionally, Mount Diablo Unified School District (MDUSD) operates one elementary school within City limits Table 3.13-3 shows a list of public schools within Martinez by grade, enrolment, and estimated capacity.

Table 3.13-3: Public Schools Serving Martinez

SCHOOL	GRADES SERVED	ENROLLMENT 2013-2014
Hidden Valley	K-5	785
John Muir Elementary	K-5	382
John Swett Elementary	K-5	508
Las Juntas Elementary	K-5	453
Morello Park Elementary	K-5	539

Martinez Junior High	6-8	887
Alhambra Senior High	9-12	1,202
Vicente Martinez High	9-12	114
Briones (Alternative)	K-12	46
Total		**4,916**

SOURCE: California Department of Education Educational Demographics Unit. Enrollment by Grade for 2013-14. Mt. Diablo Unified Report, and Martinez Unified Report.

OTHER PUBLIC FACILITIES

Martinez Public Library

The Library is a branch of the Contra Costa County Library system and is located on the corner of Court and Ward Streets. The Library maintains nearly 33,000 items including books, magazines, periodicals, compact discs (CDs), digital video discs (DVDs), video and audio cassettes, and other electronic resources such as e-books, which are available on the Library's website. In addition, the Library provides a variety of services such as self-serve check out, story time, book clubs, craft, music, activity workshops, college prep help, a reading garden, and computers with internet access. In 2011, the Library was renovated with Measure H funds and is not expected to require major infrastructural improvements in the near future.

Senior Center

Located Downtown at 818 Green Street, the Martinez Senior Center promotes educational, recreational and social activities, as well as provides services that meet the needs of the senior citizens of Martinez and surrounding cities. Members must be 50 years of age or older to join the Senior Center. The Senior Center provides a monthly newsletter to their members, which lists on-going activities, tours and special events.

3.13.2 REGULATORY SETTING

FEDERAL

There are no federal regulations applicable to the environmental topics of public services and recreation.

STATE AND LOCAL

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air,

access roads, and the testing, maintenance, and use of all fire fighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

CALIFORNIA FIRE CODE

The California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

MARTINEZ EMERGENCY OPERATIONS PLAN

The Emergency Operations Plan (EOP) identifies the City of Martinez's emergency planning, organization and response policies and procedures. The EOP addresses the City's responsibilities in emergencies associated with an "all hazards" approach in managing natural disasters and human-caused emergencies and provides a framework for coordination of response and recovery efforts

within the City in coordination with local, State, and Federal agencies, while maintaining the flexibility needed to adapt to various situations that arise.[4]

The EOP addresses the following priorities for emergency services response:

1) Preserve the life, health and safety of all citizens;
2) Protect public and private property;
3) Restore order to the community;
4) Safeguard the environment; and
5) Ensure cost recovery.

The EOP establishes a phased approach for emergency planning and addresses mitigation, preparedness, response, and recovery.

Mitigation Phase

The mitigation phase involves taking proactive efforts to minimize potential effects upon life and property in order to create a safer environment that will result in fewer casualties and lower response costs. This may also include taking actions to strengthen facilities, abate nearby hazards, and reduce the potential damage either to structures or their contents.

Preparedness Phase

The preparedness phase involves taking steps to proactively plan for development of operational capabilities needed in order to respond to a disaster. The EOP includes the development of Standard Operating Procedures (SOPs) and checklists detailing personnel assignments, policies, notification procedures, and resource lists. Personnel should be acquainted with these SOPs and checklists and periodically should be trained in activation and execution. The EOP addresses providing education and training, utilizing nationally recognized preparedness programs such as: CERT (Community Emergency Response Team), PEP (Personal Emergency Preparedness) and American Red Cross courses on First Aid/CPR/AED aid emergency response personnel in providing assistance to the public.

Response Phase

Before an emergency occurs, this phase involves recognition of the approach of a potential disaster where actions are taken to save lives and protect property. Warning systems may be activated and resources may be mobilized, EOCs may be activated and evacuation may begin. As the emergency continues, assistance is provided to victims of the disaster and efforts are made to reduce secondary damage. Response support facilities may be established. The resource requirements continually change to meet the needs of the incident.

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[4] City of Martinez Emergency Operations Plan 2009. Available at: http://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?blobid=6127

Recovery Phase

Recovery is taking all actions necessary to restore the area to pre-event conditions or better, if possible. Therefore, mitigation for future hazards plays an important part in the recovery phase for emergencies.

MULTI-JURISDICTIONAL LOCAL GOVERNMENT HAZARD MITIGATION PLAN FOR THE SAN FRANCISCO BAY AREA

The Association of Bay Area Governments (ABAG) prepared and adopted a Local Hazards Mitigation Plan in 2005. The purpose of the Plan is to serve as a catalyst for a dialogue on public policies needed to mitigate the natural hazards that affect the San Francisco Bay Area. The overall strategy of the Plan is to utilize a multi-jurisdictional effort to maintain and enhance the disaster resistance of the region, and to fulfill the requirements of the Disaster Mitigation Act of 2000 for all local governments to develop and adopt this type of plan.

MARTINEZ DEVELOPMENT FEE PROGRAM

The City of Martinez Development Fee Program contains impact mitigation fees to improve the required infrastructure identified in the City's General Plan. Infrastructure fees related to public services and recreation including parks and recreation, police, and child care facilities are shown below in Table 3.11-4.

Table 3.13-4: Impact Mitigation Fee Schedule

	LAND USE CATEGORIES				
IMPACT MITIGATION FEES	SINGLE-FAMILY RESIDENTIAL (PER UNIT)	MULTI-FAMILY RESIDENTIAL (PER UNIT)	RETAIL (PER SQ. FT.)	OFFICE (PER. SQ. FT.)	INDUSTRIAL (PER SQ. FT.)
Parks & Recreation	$2,509	$1,834	$1.09	$1.41	$0.61
Park In-Lieu	$5,095	$3,723	-0-	-0-	-0-
Childcare Facilities	$432	$86	$0.16	$0.44	$0.18
Police Facilities	$411	$411	$0.39	$0.05	$0.05
Totals:	$14,041	$10,048	$5.00	$5.15	$2.47

Source: City of Martinez Schedule of Fees for City Services 2009 (Revised 2015).

Schools

CALIFORNIA GOVERNMENT CODE

The California Government Code states at Section 65995 (h) "The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities."

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-UNIVERSITY PUBLIC EDUCATION FACILITIES BOND ACT OF 2002 (PROP 47)

This act was approved by California voters in November 2002 and provides for a bond issue of $13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the

voters in November 1998 known as "Proposition 1A", reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.

- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

- Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

Martinez General Plan

The adopted City of Martinez General Plan provides policy direction regarding public services and facilities in the Land Use, Parks and Recreation, and Community Facilities Elements.

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on public services if it would result in:

- Substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, and/or the need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- Fire Protection
- Police Protection
- Schools
- Parks
- Other public facilities

Impacts associated with parks are discussed in Section 3.14, Recreation.

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: General Plan implementation could result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services including: Fire protection, Police protection, Schools, and Other public facilities (Less than Significant)

Development accommodated under the General Plan would result in additional residents and businesses in the city, including new residential, commercial, office, and industrial uses. As described in Chapter 2.0, the General Plan is expected to accommodate up to 2,900 new residential dwelling units and over 1.2 million square feet of non-residential building space within the Planning Area at full buildout.

This new growth within the Planning Area would increase the city's population by approximately 7,105 residents.[5] The full development of the new non-residential uses shown in Table 2-2 would increase the employment opportunities in Martinez by approximately 2,390 employees.[6]

As the demand for services increases, there will likely be a need to increase staffing and equipment in order to maintain acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire departments, etc.) may be needed to accommodate adequate staffing, equipment, and appropriate facilities to serve growth in the city.

[5] Based on the 2013 California Department of Finance estimate of 2.45 persons per household.

[6] Assumes one employee generated for: every 549 square feet of commercial space, every 324 square feet of office space, and every 557 square feet of industrial space.

Development and growth facilitated by the Martinez General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. The General Plan includes goals, policies, and implementation measures to ensure that public services are provided at acceptable levels and to ensure that development and growth does not outpace the provision of public services.

FIRE PROTECTION

The General Plan Update includes a range of goals, policies, and implementation measures to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agencies, and that new development funds its fair share of services. The General Plan includes policies to ensure that fire protection services keep pace with new development and services are adequately planned and provided.

Goal PS-G-4 provides for protection from potential fire hazards and is supported by Policy PS-P-4.1, that ensures necessary maintenance to open space brush areas that are susceptible to burning. PS-P-4.3 ensures continued collaboration and work with the Contra Costa Fire Department to make Martinez more resilient to fire hazards. PS-P-4.6 encourages the use of fire retardant vegetation for landscaping, especially in high fire hazard areas. PS-P-4.5 supports the review, amendment, and update, at regular intervals, all relevant City codes and ordinances to incorporate the most current knowledge and highest standards for safety. PS-I-4.1b ensures the review of current building and planning codes to require new developments and renovations to comply with the California Building Code, California Fire Code and local ordinances for construction and adequacy of water flow and pressure, ingress/egress and other measures for fire protection. PS-I-5.3.f ensures the location of public facilities, such as schools and hospitals are not located in Fire Hazard Areas and if they are in the event of a fire they can safely evacuate and or operate.

Additionally, the Growth Management Element includes Goal GM-6 for the compliance with applicable levels of service. Policies GM-P-6.1 and GM-P-6.2 support this goal by requiring new development to contribute to, and maintain a accepted performance standards for fire and emergency response and services, and requiring the City to adopt and maintain a development mitigation program to ensure new development pays its share of costs associated with the associated growth.

The policies identified above and payment of development impact fees would reduce the potential for implementation of the General Plan to result in increased impacts to fire protection services and facilities to a level of insignificance by ensuring that adequate facilities are provided to serve new development. Future development would be required to be consistent with the proposed General Plan, the General Plan Land Use Map, and State requirements. The implementation of the General Plan is intended to ensure that development in the Martinez Planning Area is supplied with adequate fire service throughout the Planning Area.

POLICE PROTECTION

The General Plan Update includes a range of goals, policies, and implementation measures to ensure that police protection services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agencies, and that new development funds its fair share of services. The General Plan includes policies to ensure that police protection services and facilities keep pace with new development and that services are adequately planned and provided.

The Growth Management Element includes Goal GM-6 for the compliance with applicable levels of service. Policies GM-P-6.1 and GM-P-6.2 support this goal by requiring new development to contribute to and maintain adopted and accepted performance standards for police, and emergency response services, and requires the City to adopt and maintain a development mitigation program to ensure new development pays its share of costs associated with the associated growth.

The policies identified above and payment of development impact fees adopted by the City would reduce the potential for implementation of the General Plan to result in increased impacts to police protection services and facilities to a level of insignificance. Future development would be required to be consistent with the proposed General Plan, the General Plan Land Use Map, and State requirements. The implementation of the General Plan is intended to ensure that development in the Martinez Planning Area is supplied with adequate police service throughout the Planning Area.

SCHOOLS

Implementation of the General Plan Update would indirectly lead to new population growth within the city limits and Planning Area, which would increase the demand for schools and school facilities throughout the city and the Planning Area. The City of Martinez is served by the Martinez Unified School District (MUSD), which serves over 4,000 students grades K-12 and operates four elementary schools (grades K-5), one middle school (grades 6-8), one high school (grades 9-12), two alternative/independent study schools, and one Adult Education school. Additionally, Mount Diablo Unified School District (MDUSD) operates one elementary school within City limits.

Goal PCUG-6 would ensure adequate and high quality educational facilities to serve the community is supported by policies and implementation measures including: PCU-P-5.1 that ensures continued maintenance and upgrades to existing educational facilities so there are a wide range of facilities and activities for the community within school properties, PCUP-6.1 which supports the continued cooperation with the Martinez Unified School District to assist in obtaining funds from State and Federal sources to improve school facilities and performance, and PCU-P-6.2 which supports library facilities within the City, by ensuring access to library services and working with the Contra Costa Library District.

As discussed previously, the California Government Code, California Department of Education, and Senate Bill No. 50 govern a school district's authority to levy school impact fees. MUSD and

MDUSD collect developer fees in order to assist in funding facility needs at their sites and to acquire and develop new school sites to meet increased demand for schools and school facilities. In accordance with Section 65995(h) of the California Government Code, the payment of statutory fees "…is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities."

The policies identified above and payment of development impact fees adopted by the school districts would reduce the potential for implementation of the General Plan to result in increased impacts to school facilities to a level of insignificance. Future development would be required to be consistent with the proposed General Plan, the General Plan Land Use Map, and State requirements. The implementation of the General Plan is intended to ensure that development in the Martinez Planning Area protects school facilities through a continued effort to supply adequate, high quality facilities throughout the Planning Area.

OTHER PUBLIC FACILITIES

The General Plan Update includes a range of goals, policies, and implementation measures to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agencies, and that new development funds its fair share of services. The General Plan includes policies to ensure that police and fire protection services keep pace with new development and that school, library, and other governmental services are adequately planned and provided.

Existing facilities may be expanded at their current location, and new facilities may also be constructed. The Parks and Recreation (P&R) and Public and Quasi-public Facilities land use designations would accommodate the majority of new public facilities necessary to provide community services.

CONCLUSION

As future development and infrastructure projects, including new and/or expanded governmental and public service facilities, are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

As previously stated, increased levels of staffing and equipment will be needed to serve growth allowed under the General Plan. The environmental effect of providing the public services is associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose development of any such facilities nor does it approve any new public facilities or expansion of public facilities. However, new and expanded public facilities are anticipated to be primarily provided on sites with land use designations that allow such uses and the environmental

impacts of constructing and operating the governmental facilities would subject to the General Plan policies listed above and the General Plan requirements related to specific environmental topics as discussed in Chapters 3.1 through 3.16, and 4.0 of this Draft EIR.

This Draft EIR addresses the potential impacts of development that may occur under the Martinez General Plan, including residential, commercial, office, industrial, public facilities, and a range of other uses that are accommodated by the General Plan. The policies identified above include numerous requirements that would reduce the potential for General Plan implementation to result in increased impacts to public services and facilities including governmental facilities, and the provision of public services. Future development would be required to be consistent with the proposed General Plan and the General Plan Land Use Map. Implementation of the proposed General Plan Update would result in a **less than significant** impact associated with the provision of public services and facilities; see Chapters 3.1 through 3.12 and 3.14 through 4.0 for discussion of specific environmental impacts, including but not limited to aesthetics, air quality, noise, and traffic, that would occur with development under the General Plan, including development of new and expanded public services facilities as accommodated by the Land Use Map, associated with the environmental effects of new or expanded public services and facilities, or the provisions of services and facilities.

GENERAL PLAN GOALS POLICIES, AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Parks Community Facilities and Utilities Element

Policies

PCU-P-5.1 Continue to maintain and upgrade when feasible existing educational facilities so there are a wide range of facilities and activities for the community within school properties.

Implementation Measures

PCU-I-5.1a Encourage the Martinez Unified School District to open facilities to the public, particularly during the summer months.

PCU-I-5.1b Consider new methods to fund joint public facilities and improve as needed.

Policies

PCU-P-6.1 Continue to work with the Martinez Unified School District to assist in obtaining funds from State and Federal sources to improve school facilities and performance.

PCU-P-6.2 Continue to support library facilities within the City of Martinez, by insuring access to library services and working with the Contra Costa Library District.

Implementation Measures

PCU-I-6.1a Consider joint programs between the school district and City to provide opportunities for the school district and students to work together to maintain facilities and programs.

Growth Management Element

Policy

GM-P-6.1 Ensure and require that new development contribute to and maintain adopted an accepted performance standards for police, fire and emergency medical response and services.

GM-P-6.2 Adopt and maintain in place a development mitigation program to ensure new growth is paying its share of the costs associated with that growth.

Land Use Element

Goal

LU-G-1 Promote a balanced land use pattern, a mix of which enhances community character and serves the needs of existing and future residents. Encourage land use development to occur in an orderly fashion and in pace with the expansion of public facilities. Provide appropriate transitions between single family neighborhoods and higher intensity uses.

Public Safety Element

Policy

PS-P- 4.1 Perform necessary maintenance on open space brush areas that are susceptible to burning.

PS-P- 4.2 Prevent the invasion of grassland by Baccaharis (a highly fire prone plant) by retaining grazing on publically owned rangelands and integrating grazing practices within developed areas.

PS-P-4.3 Continue to work with Contra Costa Fire Department to make Martinez more resilient to fire hazards.

PS-P-4.4 Work with Contra Costa Fire Department to promote public awareness.

PS-P-4.5 Review, amend, and update, at regular intervals, all relevant City codes and ordinances to incorporate the most current knowledge and highest standards for safety.

PS-P-4.6 Encourage the use of fire retardant vegetation for landscaping, especially in high fire hazard areas.

Implementation Measures

PS—I-4.1a Work with Contra Costa Fire Protection to support and consider providing fire safety demonstrations at public schools, civic and local organizations, businesses, industries, institutions and public gatherings.

PS-I-4.1b Review current building and planning codes to require new developments and renovations to comply with the California Building Code, Fire Code and local ordinances for construction and adequacy of water flow and pressure, ingress/egress and other measures for fire protection.

Policies

PS –P- 5.1 Require fire safe construction practices, such as fire preventive site design, landscaping and building materials, and installation of sprinklers on new development and redevelopment projects.

PS –P- 5.2 Encourage landscaping maintenance programs to reduce potential fire hazards in the hills, wildland areas and urban interface.

PS -P– 5.3 Reduce fire hazard risks in existing developments by ensuring that private property is maintained to minimize vulnerability.

Implementation Measures

PS –I- 5.3a Non-Combustible Construction

Consider implementation of requirements for non-combustible roofs, and exterior siding in high fire areas. Continue to enforce regulations related to fire resistant construction, sprinkler systems and early warning fire detection system installation.

PS –I- 5.3b Development Review

Through the project review process, continue to ensure that landscaping, lighting, building siting and design, adequate water pressure and peak load storage capacity, and building construction materials reduce the opportunity for fire hazards.

PS –I- 5.3c Firefighting Access

Continue to require access for emergency vehicles and firefighting equipment on all new development and redevelopment projects. The City shall also identify the feasibility of constructing additional emergency access improvements, such as:

- *Additional vehicle pullouts at key hillside locations.*
- *Limiting or restricting on-street parking at key hillside locations.*
- *Potential for construction of new or improved emergency access routes.*

PS-I-5.3.d Urban WildLand Interface Ordinance

Continue to implement the Urban Wildland Interface Ordinance.

PS – I-5.3e Update Fire Hazard Maps

Periodically update maps identifying fire hazard areas in Martinez.

PS-I-5.3.f Public Facility Location

Ensure the location of public facilities, such as schools and hospitals are not located in Fire Hazard and if they are in the event of a fire they can safely evacuate and or operate

PS-I-5.3g: Vegetation Management

Continue to consider the requirement of vegetation management plans in all new development. The City shall also identify the feasibility of other vegetation management options, including:

- *Increased landscaping safety through elimination of use of fire-hazardous plants.*
- *Use of non-prolific landscaping species.*
- *Requiring project proponents in hillside areas to evaluate and upgrade as necessary fire flows and water supplies to hillside areas.*

PS-I-5.3h: Construction Materials

Continue to require use of construction materials that decrease fire hazards in new developments in hillside areas, including mandatory use of spark arresters on chimneys. Include provisions in the Design Guidelines.

PS-I-5.3.i: Landscaping Requirements

Require the use of fire-safe planting materials in landscape plans for new development, including the use of non-prolific species. Include provisions in the Design Guidelines.

PS –I- 5.3j: Use Website for Fire Awareness

Provide information on methods for reducing fire hazards through the City's website and newsletter, including clearing of plant debris and using fire-safe landscaping.

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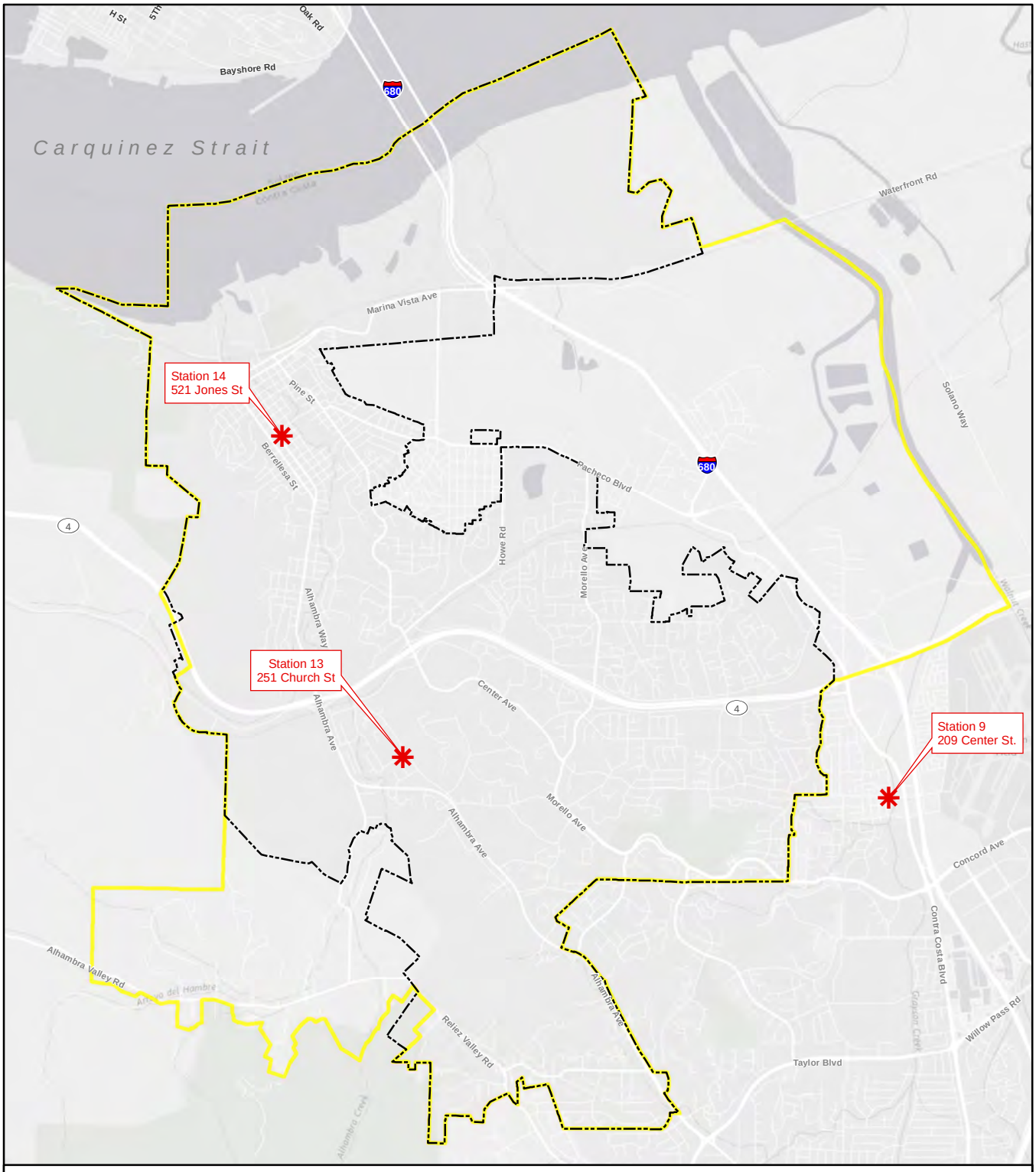

Legend

- Fire Stations
- City Limit
- Sphere of Influence

CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.13-1 Fire Station Locations

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Miles

Data sources: City of Martinez GIS; Contra Costa County Fire Protection District; ArcGIS Online Basemap Service.Map date: November 25, 2014. (MartinezGPEIR_FireStations_Fig3-12-1_141125)

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This section provides a background discussion and analysis of parks and recreational facilities and services. This section is organized with an existing setting, regulatory setting, and impact analysis.

3.14.1 EXISTING CONDITIONS

PARKS AND RECREATIONAL FACILITIES

The Public Works Department oversees developed park space within Martinez. This space is distributed between many parks that vary greatly in terms of size and amenities offered. In some instances the City has partnered with another institution, such as Martinez Unified School District, to provide additional park space and contribute to the diversity of recreational opportunities through joint use agreements. Table 3.14-1 provides the name, type, and acreage information for parks maintained by the City. The designated space types for Table 3.14-1 are defined as follows:

- Community Park: Intended to meet the demands of a large portion of the City, it is larger and offers more, and often more specialized amenities than a neighborhood park.
- Linear Park: A park located along a roadway, waterway, bikeway, or other similar public corridor.
- Memorial Park: A park with the primary purpose of recognizing and commemorating particular historical events, persons, or places.
- Neighborhood Park: A park developed to serve the recreational needs of a small portion of the City, typically within half a mile of the park. It is usually family- and children- oriented and may have play equipment and/or sports courts and fields.
- Plaza: A formal, generally flat open area characterized by pedestrian walkways and passive features such as benches, fountains and formal garden planting beds.
- School Park: A park developed, improved and maintained on school grounds either by the school district or the City that is used by the community or neighborhood at large. This type of park recognizes the lack of existing neighborhood facilities to serve its immediate area and lack of available land in developed areas for new parks.
- Special Use Park: A park designated to meet the specific needs of a particular activity.

City Parks

A summary of existing City parks, including park type, and acreage, is provided in Table 3.14-1. Figure 3.14-1 shows park locations in Martinez.

Table 3.14-1: Existing Park Facilities

PARK	PARK TYPE	ACREAGE
Alhambra Park		0.55
Cappy Ricks Park	Neighborhood	1.9
Ferry Point Picnic Area	Memorial	3.8
Foothills Park	Linear	2.3

Table 3.14-1: Existing Park Facilities

PARK	PARK TYPE	ACREAGE
Golden Hills	Neighborhood	9.6
Highland Avenue Park	Neighborhood	0.25
Hidden Lakes Park	Community	24
Hidden Valley Park	Community and School*	17
Hidden Valley Linear Park	Linear	2.3
Holiday Highlands Park	Neighborhood	2
John Muir	School*	7.4
John Muir Memorial Park	Plaza	0.42
Main Street Plaza	Plaza	0.45
Martinez Marina	Community*	60.0
Morello Park	Community and School*	7.1
Mountain View Park	Neighborhood*	4.5
Nancy Boyd Park	Community and Memorial	7.3
Plaza Ignacio Martinez	Plaza	1
Rankin Park	Community	42
Susana Street Park	Neighborhood	1.2
Steam Train Display	Community	0.25
Waterfront Park	Community*	31
Veterans Memorial Park	Memorial	0.2

*Denotes lease in effect for a portion or all of space

The City's General Plan established a park to resident ratio with the goal of 5 acres of park space for every 1,000 residents. Martinez residents currently enjoy 6.22 acres of park space per every 1,000 residents.[1]

Open Space

In addition, to the park facilities offered throughout the city, Martinez residents currently have access to over 410 acres of open space. These natural areas are maintained by the City, East Bay Regional Parks District, and Muir Heritage Land Trust, and provide residents and nonresidents with numerous miles of local and regional trails that support hiking, biking, and horseback riding, scenic view areas, and active and passive recreational opportunities.

Trails

Trails provide opportunities for recreation throughout the City and surrounding areas. Hikers, bikers, and equestrian riders all use trails, although their specific requirements for types of trails may vary. Trails provide recreational value associated with physical fitness and the enjoyment of

[1] Martinez General Plan Public Facilities and Recreation Element, 2015

the natural and scenic environment. Also, some trails provide safe, off-street links between neighborhoods, parks, schools, and other public facilities.

Public Recreational Facilities

RANKIN AQUATIC CENTER

The Rankin Aquatic Center is located at 100 Buckley Street. This aquatic center includes a play pool with a beach entry, play equipment, and 1-3 foot depth teaching area. The lap pool has eight lanes for swim meets and lap swimming with the ability for staff to create three 30 meter lanes for long course swimming. Additionally the lap pool includes a diving well, self-operating handicap lift and easy access stairs. Bordering the pools are five covered picnic areas for shade. The administration building houses aquatic personnel, and has room for lifeguard classes and in-service trainings.

MARTINEZ MARINA

For more than 40 years the Martinez Marina has been supporting boating and fishing enthusiasts. The Marina includes a boat launch ramp, fishing pier, boat slips, harbormaster building. Future maintenance of the Marina may include more dredging, break water wall repair, and entrance reconfiguration contingent upon the availability of public and private funding. The City continues to maintain the Marina by upgrading facilities and the continued dredging of the water channel.

3.14.2 REGULATORY SETTING

FEDERAL

There are no federal regulations applicable to the environmental topics of recreation.

STATE AND LOCAL

Quimby Act

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City has adopted park fees as allowed by the Quimby Act, as described in greater detail below.

Martinez Development Fee Program

The City of Martinez Development Fee Program contains impact mitigation fees to improve the required infrastructure identified in the City's General Plan. Infrastructure fees related to parks and recreation facilities are shown below in Table 3.14-2.

Table 3.14-2: Impact Mitigation Fee Schedule

	LAND USE CATEGORIES				
IMPACT MITIGATION FEES	SINGLE-FAMILY RESIDENTIAL (PER UNIT)	MULTI-FAMILY RESIDENTIAL (PER UNIT)	RETAIL (PER SQ. FT.)	OFFICE (PER. SQ. FT.)	INDUSTRIAL (PER SQ. FT.)
Parks & Recreation	$2,509	$1,834	$1.09	$1.41	$0.61

Source: City of Martinez Schedule of Fees for City Services (Revised 2015).

Martinez General Plan

The adopted City of Martinez General Plan addresses recreation in the Land Use and Parks and Recreation Elements.

3.14.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on public services if it would result in:

- An increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: General Plan implementation may result in adverse physical impacts associated with the deterioration of existing parks and recreation facilities and require the construction of new parks and recreation facilities which might have an adverse physical effect on the environment (Less than Significant)

Since the 1980s the City has established a resident to parkland ratio of 5 acres of park space for every 1,000 residents. Martinez residents currently enjoy 6.22 acres of park space per every 1,000 residents. In addition, Martinez residents have access to over 410 acres of open space. Growth accommodated under the General Plan Update would include a range of uses that would increase the population of the city, and also attract additional workers and tourists to the city. This growth would result in increased demand for parks and recreation facilities. It is anticipated that over the life of the General Plan, use of regional parks, trails, and recreation facilities would increase, due to new residents as well as tourists visiting the city.

The use of neighborhood parks would also increase, but the level of increase would be less pronounced since new subdivisions and development projects would be required to provide adequate parks and open space and/or in-lieu fees to ensure that adequate parks and recreation facilities keep pace with new development and are provided to serve the development. The General Plan Update includes a range of goals, policies, and implementation measures to ensure that parks and recreation facilities are adequately provided and funded, are coordinated between the City and appropriate agencies.

Goal PCU-G-2 establishes the City's parkland standard to acquire and develop park land using a standard of five (5) acres per one thousand residents. This goal is supported by various policies and implementation measures including: PCU-P-1.1 that ensures the City continues to maintain existing facilities, PCU-P-1.2 that supports the development of new park facilities and or upgrade existing facilities providing for accessibility, durability and low maintenance areas, PCU-P-1.3 which requires developers to contribute to the parks and open space system based on their proportional share of needs generated by new residents in accordance with the Quimby Act, and PCU-P-1.4 which supports periodically updating the Park Impact Fee to continue to insure the City's ability to maintain park and recreation facilities. PCU-1.2a establishes priorities and recommends funding for specific park and recreational facilities through the Capital Improvement Program process.

Trail development is supported by the General Plan through Goal PCU-G-3, which establishes that interconnected Trail Systems providing access to recreational opportunities should continue to be developed and enhanced. Policy PCU-P-3.1 ensures trail connections are improved within the Planning Area, while ensuring funding for trail acquisition, construction and maintenance is developed. PCU-P-3.2 ensures the City locates and constructs new trails to maximize their potential use and enjoyment by residents and visitors. PCU-P-3.3 ensures that trail development is incorporated into the development in the City's Capital Improvement Program (CIP). PCU-P-3.4 considers development on parcels which provide missing links in the trail system, and establishes that trails and connections should be incorporated into the development plan by easement or dedication of public right-of-way. PCU-P-3.5 establishes collaboration between the City and the East Bay Regional Parks District (EBRPD), Contra Costa Water District, Contra Costa County, adjacent cities, regional trail groups, and other public agencies on trail planning issues, such as trail development and linkages. PCU-P-3.6 ensures that trail construction will be according to the standards established by the *California Trails*.

Goal PCU-G-2 establishes a citywide ratio of five acres of parkland per 1,000 residents. With the projected buildout and projected population increases within the city (including existing plus projected population growth), the City estimates that an additional 29.5 additional acres of Parkland will be needed to meet the 5 acres per 1000 residents requirement. As future parks and recreation projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Parks and recreation projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. The General Plan establishes the policies that would ensure that existing parks and

recreation facilities are improved and maintained, by providing for a range of improvements appropriate to serve growth and ensure on-going improvement and maintenance of existing facilities, and includes provisions to ensure that adequate parks and recreational facilities are provided at a pace adequate to serve new population growth.

The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown. However, as future development of parks and recreational facilities are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent park development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

This Draft EIR addresses the potential impacts of development that may occur under the General Plan Update, including residential, commercial, office, industrial, public facilities (including parks), and a range of other uses that are accommodated by the General Plan. The policies identified in the proposed General Plan, compliance with The Quimby Act, and the City of Martinez Development Fee Program, would reduce the potential for implementation of the proposed project to result in increased impacts to public recreational facilities including parks, and the provision of recreational services. Future development would be required to be consistent with the proposed General Plan, the General Plan Land Use Map, and State requirements. The implementation of the General Plan is intended to ensure that development in the Martinez Planning Area protects Park and recreational facilities through a continued effort to supply adequate, high quality facilities throughout the Planning Area. Implementation of the General Plan would have a **less than significant** impact to parks and recreational facilities; ; see Chapters 3.1 through 3.13 and 3.15 through 4.0 for discussion of specific environmental impacts, including but not limited to aesthetics, air quality, noise, and traffic, that would occur with development under the General Plan, including development of new and expanded public services facilities as accommodated by the Land Use Map, associated with the environmental effects of new or expanded parks and recreation facilities.

GENERAL PLAN GOALS POLICIES, AND IMPLEMENTATION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Parks Community Facilities and Utilities Element

Policies

PCU-P-1.1 Continue to maintain existing facilities.

PCU-P-1.2 Develop new park facilities and or upgrade existing facilities providing accessibility, durability and low maintenance.

PCU-P-1.3 Require Developers to contribute to the parks and open space system based on their proportional share of needs generated by new residents in accordance with the Quimby Act.

PCU-P-1.4 Periodically update Park Impact fees to continue to insure the City's ability to maintain park and recreation facilities.

Implementation Measures

PCU-1.2a Establish priorities and recommend funding for Specific Park and recreational facilities through the Capital Improvement Program process

Policies

PCU-P- 2.1 Develop civic parks, plazas and squares that provide urban park spaces and community gathering places as funding permits.

PCU-P-2.2 As development occurs citywide develop linear parks and green spaces that create alternative routes for walking and enhance the area as possible. Where possible reuse abandoned or underutilized transportation corridors for pedestrian walking and hiking.

Implementation Measures

PCU-2.1a Pursue opportunities for acquisition of underutilized or abandoned properties for development into linear parks, civic squares providing opportunities to create additional park land.

PCU-I-2.1b Periodically review priorities, standards and guidelines and revise as necessary to reflect any changes in community trends and or needs.

PCU-I-2.1c Conduct reviews and updates of the Parks, Community Facilities and Utilities Element of the General Plan as needed to assess changes.

Policies

PCU-P-3.1 Improve trail connections within and beyond the City Limits and coordinate funding for trail acquisition, construction and maintenance, whenever feasible.
Implementation

PCU-P-3.2 Locate and construct new trails where access is easy to maximize their potential use and enjoyment by residents and visitors. Consider locating new trails within unused street rights-of-way (such as the Panoramic Drive "paper street" between Green Street and Thomas Drive).

PCU-P-3.3 Incorporate trail development in the City's Capital Improvement Program (CIP).

PCU-P-3.4 When considering development on parcels providing missing links in the planned trail system; Trails and connections should be incorporated into the development plan with a possible easement or dedication of public right-of-way when possible.

PCU-P-3.5 Work with the East Bay Regional Parks District (EBRPD), Contra Costa Water District, Contra Costa County, adjacent cities, regional trail groups, and other public agencies on trail planning issues, such as trail development and linkages.

PCU-P-3.6 Construct trails according to the standards established by the California Trails Manual and EBRPD standards.

PCU-P-3.7 Locate new trails with an emphasis on scenic qualities and making connections with local and regional open space areas, parks, points of interest and community facilities.

PCU-P-3.8 When appropriate, encourage the public purchase of private lands for the preservation of open space ridge lines.

PCU-P-3.9 Require future development within or upon ridgelines to include a condition of approval to provide access to and from or through the development via public trails.

Implementation Measures

PCU-I-3.1a Establish priorities for funding for specific park or trailhead land through the Capital Improvement Program process.

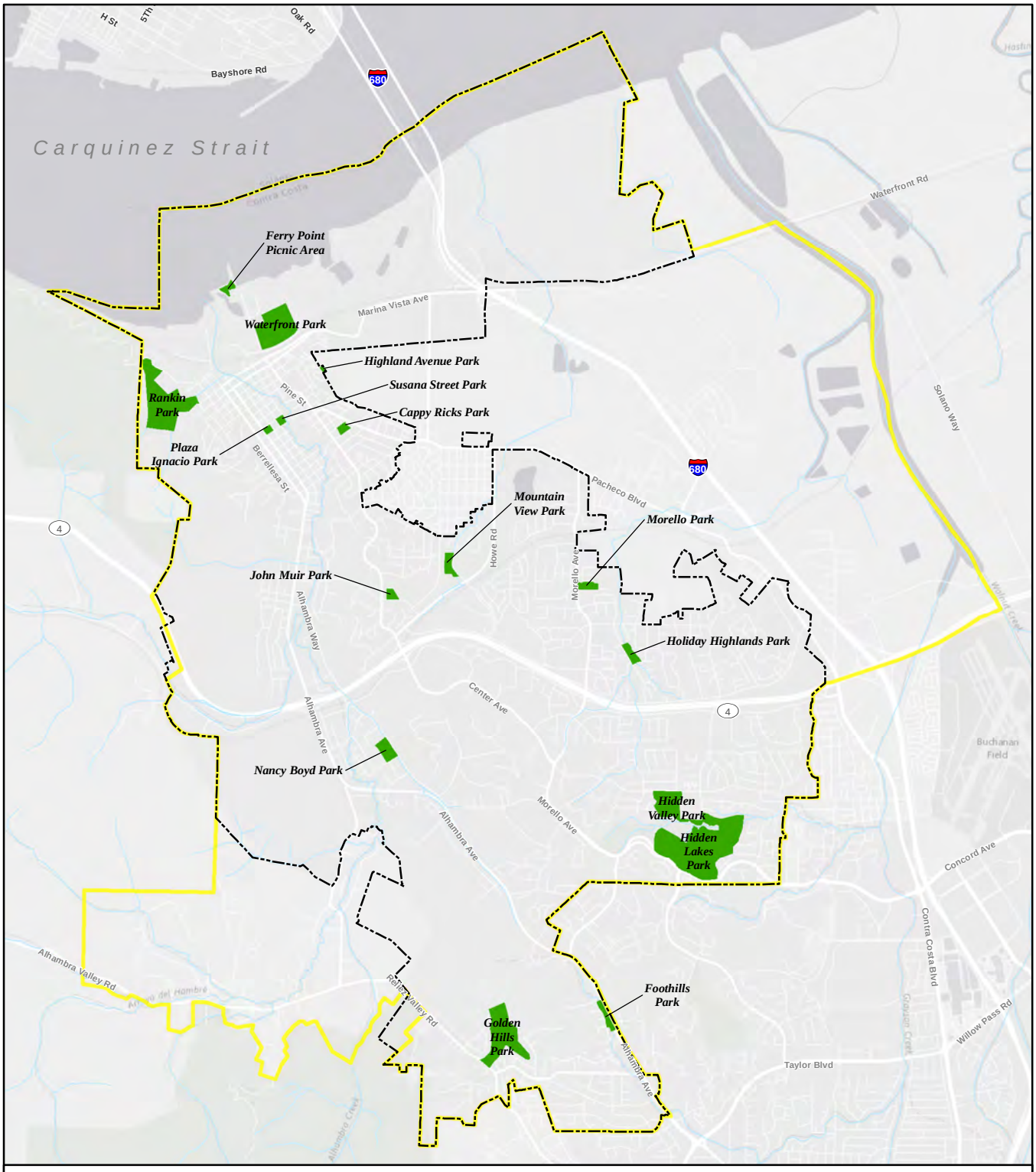
PCU-I-3.1b Consider purchasing land or accepting land dedication suitable for future trail development and recreational uses as land becomes available.

Policies

PCU-P-4.1 Continue to provide an array of recreational programs to the public.

Implementation Measures

PCU- 4.1a Offer high quality recreational programs that cover costs through user fees.



CITY OF MARTINEZ GENERAL PLAN UPDATE

Figure 3.14-1: Parks

Legend

- City Limit
- Sphere of Influence
- City Parks

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Miles

Data sources: City of Martinez GIS; Contra Costa County GIS; ESRI StreetMap North America; ArcGIS Online Basemap Service
Map date: November 23, 2014. (MartinezGPEIR_Parks_Fig3-12-5_141123)

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This chapter describes the potential impacts to the transportation system associated with adoption and implementation of the General Plan. The impact analysis examines the roadway, transit, bicycle, and pedestrian components of the city's transportation system. To provide a context for the impact analysis, this chapter begins with the environmental setting, which is a description of the existing physical and operational conditions for the transportation system. Following the setting is the regulatory framework influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis. The chapter concludes with the impact analysis findings and recommended mitigation measures. This chapter was based on traffic modeling and analysis prepared by Omni-Means.

3.15.1 TRANSPORTATION SETTING

The existing physical and operational conditions for Martinez's transportation system are based on review of local and regional transportation plans, including the proposed project's Circulation Element, as well as physical review of the existing transportation system, as described below. Descriptions are organized by transportation system component beginning with roadways and intersections, and followed by the pedestrian and bicycle network, transit system, and truck routes.

EXISTING CIRCULATION NETWORK

The City of Martinez is located west of the Interstate 680 and is bisected by State Route 4. Traffic to and from the I-680 corridor is served by State Route 4, Pacheco Boulevard, Arthur Road and Marina Vista Avenue. Traffic to and from the State Route 4 corridor is served by Pacheco Boulevard, Morello Avenue, Center Avenue-Pine Street, and Alhambra Avenue. Access to and from the North Bay, including the Counties of Solano and Sonoma, is provided via I-680 (via the Martinez-Benicia Bridge) or State Route 4 via I-80. Access to and from Contra Costa County both east and west is provided by State Route 4. Additionally, access to and from the south is provided by I-680 which serves both Contra Costa County and Alameda County. Figure 3.15-1 shows the major routes in the regional roadway system.

Roadway System

This section describes the physical characteristics of Martinez's primary roadway network.

ROUTES OF REGIONAL SIGNIFICANCE

The Contra Costa Transportation Authority (CCTA) has designated a regional system of streets that has been determined critical to regional transportation in Contra Costa County and connectivity to neighboring counties. These Routes of Regional Significance include the highways operated and maintained by Caltrans that pass through Martinez, as well as other routes that connect to adjacent communities. The following corridors in Martinez have been identified by the CCTA as Routes of Regional Significance:

- Interstate 680
- State Route 4
- Alhambra Avenue
- Pacheco Boulevard

Interstate 680 (I-680) is the main freeway that directly serves the City of Martinez. I-680 is a north-south eight-lane facility and is a major link in the state highway system providing regional access to the cities between San Jose, Walnut Creek, Martinez, Benicia, and Fairfield. Interchanges serving Martinez are located at I 680's junctions of SR 4, Pacheco Boulevard, and Marina Vista Avenue.

State Route 4 (SR 4) is an east-west 4-lane facility providing regional access between Hercules, Martinez, Concord, Antioch, and beyond into the Central Valley and foothills. Within Martinez, SR 4 has three (3) interchanges that are located at Morello Avenue, Center Avenue-Howe Road, and Alhambra Avenue. Just east of the City, Pacheco Boulevard also forms a full access interchange with SR 4.

Alhambra Avenue extends in a north/south direction through the City of Martinez providing access to both residential areas south of SR 4 and commercial areas in the Downtown area. A full access interchange is located at SR 4 and Alhambra Avenue. North of SR 4, the roadway enters a commercial area of the City and has four travel lanes to Bertola Street. From this point northward, Alhambra Avenue continues north as a northbound only two lane couplet (with Berrellesa Street) extending to Marina Vista Avenue. South of the City Limits, around Virginia Hills Drive, Alhambra Avenue turns into Pleasant Hill Road. From Virginia Hills Drive, Alhambra Avenue extends northerly as a four-lane arterial road to Benham Drive. From this intersection, it continues north as a wide, two-lane divided arterial to SR 4.

Pacheco Boulevard is an arterial street that extends through the City of Martinez and unincorporated Contra Costa County providing access to residential, commercial, and industrial areas. Starting at Jones Street and extending east, Pacheco Boulevard is a wide east-west two lane street providing access to residential areas. East of Shell Avenue, the roadway widens to four travel lanes and a two-way-left-turn-lane (TWLTL) and this configuration continues through Morello Avenue before narrowing to two travel lanes and a TWLTL. At Arthur Road, Pacheco Boulevard extends in a more north-south alignment paralleling I-680 to the west and providing access to both commercial and residential areas in west Martinez as a two-lane arterial street. Continuing south under SR 4, Pacheco Boulevard continues as a four-lane divided arterial street with raised, landscaped medians all the way to Contra Costa Boulevard in the City of Pleasant Hill. In this area, Pacheco Boulevard provides access to both residential and retail-commercial areas.

OTHER KEY CORRIDORS

The following major roadway corridors are not designated by CCTA as Routes of Regional Significance, but are key components of the City's roadway network.

Arnold Drive extends as an east-west frontage road along the north side of SR 4 between Howe Road and Pacheco Boulevard. A two-lane roadway with a TWLTL for most of its length, Arnold Drive provides access to commercial, office, and residential areas.

Berrellesa Street extends south from Marina Vista Avenue as a southbound two-lane couplet (with Alhambra Avenue) one block west of and parallel to Alhambra Avenue. Berrellesa Street provides access primarily to Downtown businesses and residential areas on the south side of the Downtown. The roadway rejoins Alhambra Avenue just south of Bertola Street.

Center Avenue extends primarily in an east-west direction from SR 4 through Hidden Lakes Drive and the town of Pacheco to the east. Center Avenue extends east with two travel lanes and a two-way left turn lane (TWLTL) through Morello Avenue. East of Morello Avenue the roadway continues with two travel lanes and then widens with raised landscaped medians or a TWLTL from Elderwood Drive through Glacier Drive. East of Glacier Drive the roadway continues with two travel lanes and a TWLTL. Immediately east of SR 4, Center Avenue provides access to office and commercial areas. As the roadway continues east it provides access to residential, recreational, and institutional areas.

Court Street (north of Green Street) is a two-lane continuation of Pine Street providing access through the Downtown area between Marina Vista Avenue and Pine Street. As a continuation of Pine Street, Court Street indirectly serves as a link between the Downtown area and SR 4 via Pine Street and the full-access SR 4 interchange at Center Avenue.

Escobar Street is an east-west roadway that connects residential areas west of Berrellesa Street east to the Downtown area and nearby principal arterials. Located one block south of Marina Vista Avenue, Escobar Street extends through the Downtown area as a two-way, two lane street. East of Berrellesa Street, Escobar Street forms a partial eastbound couplet (with Marina Vista Avenue). East of Court Street, the roadway becomes one-way eastbound until merging with Marina Vista Avenue south of Miller Street.

Howe Road extends north-south between Pine Street/Center Avenue and Pacheco Boulevard north of SR 4. The roadway has four travel lanes as it extends north from Center Avenue to Vista Way. North of Vista Way, Howe Road has two travel lanes with a two-way-left-turn lane and this configuration continues to Sycamore Street before the roadway narrows to two travel lanes and extends to Pacheco Boulevard. Howe Road provides access to residential, commercial, and light industrial areas.

Marina Vista Avenue (east of Berrellesa Street) extends in an east-west direction from Berrellesa Street to I-680. From I-680 west, Marina Vista Avenue is a divided two-lane arterial street providing access to industrial areas before extending into the Downtown area. West of Miller Street, Marina Vista Avenue becomes a westbound one-way couplet (with Escobar Street) as it extends into the Downtown area along the waterfront. Marina Vista Avenue provides access to Downtown areas along the waterfront as well as a main link to/from its full access interchange with I-680 to the east.

Morello Avenue is a north-south collector street that extends from Taylor Boulevard in the City of Pleasant Hill to Pacheco Boulevard. Extending south from Pacheco Boulevard, Morello Avenue is a two-lane street providing access primarily to residential and institutional areas north of the UPRR railroad tracks. The roadway continues as a two-lane collector with raised landscaped medians (in places) with left-turn lanes at major intersections through Midhill Road. As Morello Avenue approaches Arnold Drive it widens to four travel lanes as it continues south under SR 4 and through Muir Road. South of Muir Road, the roadway has two travel lanes and a TWLTL to Vine Hill Way. At Elderwood Drive, Morello Avenue splits into southbound and northbound one-way couplets before reaching Chilpancingo Parkway. The roadway continues into the City of Pleasant Hill south of Chilpancingo Parkway. Morello Avenue provides access primarily to residential areas both north and south of SR 4 and more major commercial areas adjacent to the highway.

Muir Road parallels SR 4 on its south side and is a frontage road extending between Center Avenue and Pacheco Boulevard. Providing access to institutional, commercial, and residential areas Muir Road has two travel lanes with turn lanes at major intersections.

Shell Avenue extends in a north-south direction, through mostly unincorporated Contra Costa County, from D Street east of Alhambra Avenue all the way to Marina Vista Avenue at I-680. In the segment between D Street and Pacheco Avenue, Shell Avenue is a two-lane street that provides access to residential areas of the City and County. North of Pacheco Boulevard, Shell Avenue provides access through industrial areas in north Martinez and has limited access.

Methods of Analysis

The operations of roadway facilities are described in terms of Level of Service (LOS). LOS is a qualitative description of traffic flow based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, LOS A represents free flow conditions and LOS F represents over -capacity conditions. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions.

The City of Martinez roadway facilities were evaluated on a PM peak hour volume basis. Roadway segments were evaluated by comparing PM peak hour roadway segment traffic volumes (two-way total) to peak hour service thresholds. Table 3.15-1 summarizes peak hour roadway segment capacity thresholds by operational class.

TABLE 3.15-1: OPERATIONAL CLASS AND PEAK HOUR LEVEL OF SERVICE THRESHOLDS

OPERATIONAL CLASS	PEAK HOUR LEVEL OF SERVICE CAPACITY THRESHOLD				
	LOS A	LOS B	LOS C	LOS D	LOS E
6-Lane, Arterial	--	--	2,710	5,320	5,600
4-Lane, Arterial	--	--	1,920	3,540	3,740
2-Lane, Arterial	--	--	970	1,760	1,870
4-Lane, Collector			1,100	2,360	3,040
2-Lane, Collector			550	1,180	1,520

SOURCE: HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD METHODOLOGIES.

Existing roadway operations for major roadway segments are summarized in Table 3.15-1. As is shown in Table 3.15-2, roadway segments in the General Plan area generally operate at acceptable conditions during the PM peak hour, with the exception of Pacheco Boulevard west of Arthur Road, which operates at LOS E.

TABLE 3.15-2-: PM PEAK HOUR TRAFFIC VOLUMES AND LEVEL OF SERVICE

ROADWAY SEGMENT	EXISTING ROADWAY CLASSIFICATION	EXISTING CONDITIONS	
		PM Peak Volume	LOS
Pacheco Boulevard, west of Morello Avenue	Four-Lane Arterial	1,761	≤ C
Alhambra Avenue, south of D Street	Four-Lane Arterial	1,703	≤ C
Alhambra Avenue, north of Blue Ridge Drive	Four-Lane Arterial	1,575	≤ C
Marina Vista, west of Shell Avenue	Two-Lane Arterial	812	≤ C
Shell Avenue, north of Pacheco Boulevard	Two-Lane Arterial	326	≤ C

		EXISTING CONDITIONS	
Pacheco Boulevard, west of Shell Avenue	Two-Lane Arterial	1,170	D
Pacheco Boulevard, west of Arthur Road	**Two-Lane Arterial**	**1,764**	**E**
Pacheco Boulevard, north of Arnold Drive	Two-Lane Arterial	704	≤ C
Howe Road, east of Parkway Drive	Two-Lane Arterial	485	≤ C
Morello Avenue, north of Midhill Road	Two-Lane Arterial	873	≤ C
Morello Avenue, north of Center Avenue	Two-Lane Arterial	608	≤ C
Morello Avenue, east of Elderwood Drive	Two-Lane Arterial	836	≤ C
Arnold Drive, east of Old Orchard Road	Two-Lane Arterial	1,015	D
Arnold Drive, east of Fig Tree Lane	Two-Lane Arterial	479	≤ C
Alhambra Avenue, north of Alhambra Valley Road	Two-Lane Arterial	1,666	D
Muir Road, west of Morello Avenue	Two-Lane Arterial	592	≤ C
Center Avenue, west of Rolling Hills Way	Two-Lane Arterial	309	≤ C
Center Avenue, east of Glacier Drive	Two-Lane Arterial	630	≤ C
Berrellesa Street, south of Marina Vista Avenue	Two-Lane Arterial	259	≤ C
Alhambra Avenue, south of Escobar Street	Two-Lane Arterial	151	≤ C
Escobar, east of Alhambra Avenue	Two-Lane Arterial	188	≤ C
Marina Vista, east of Berrellesa Street	Two-Lane Arterial	197	≤ C
Court Street, south of Ward Street	Two-Lane Arterial	633	≤ C
Muir Road, west of Glacier Drive	Two-Lane Arterial	483	≤ C

NOTE: BOLDED ENTRIES DENOTE ROADWAYS OPERATING ABOVE ACCEPTABLE LOS THRESHOLDS
SOURCE: OMNI-MEANS, 2015

Bicycle and Pedestrian System

In 2009 CCTA adopted the Countywide Bicycle and Pedestrian Plan. A map of Martinez' Bicycle and Pedestrian Plan is presented in Figure 3.15-2. The plan includes proposed bicycle and pedestrian trails, as well as on-street bicycle facilities to complete the partial network already in place in the City and County. The plan encourages the use of walking and bicycling and recognizes three classes of bikeways:

One of the important facets of "complete streets" is a comprehensive bicycle and pathway system to encourage the use of alternative transportation modes.

Class I Multi Use Path. Typically known as bike paths, Class I facilities are multi-use facilities that provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

Class II Bike Lane. Known as bike lanes, Class II facilities provide a striped and signed lane for one-way bicycle travel on each side of a street or highway. The minimum width for bike lanes ranges between four and five feet depending upon the edge of roadway conditions (curbs).

Class III Bike Route. Known as bike routes, Class III facilities provide signs for shared use with motor vehicles within the same travel lane on a street or highway. Bike routes may be enhanced with warning or guide signs and shared lane marking pavement stencils. While Class III routes do

not provide measures of separation, they have an important function in providing continuity to the bikeway network.

Based on the current Countywide Bicycle and Pedestrian Plan, the City's existing (and proposed) bikeway network has been shown in Figure 3.15-2.

The following roadways currently provide Class 1, II, or III bikeways:

Class I bikeway/pedestrian path:

- Benicia-Martinez Bike path (Marina Vista Avenue to Park Road)
- Contra Costa Canal Trail (Muir Road to Chilpancingo Parkway [Martinez only])
- Ferry Street (north of Marina Vista Avenue)
- North Court Street

Class II bikeways:

- Alhambra Avenue (Marina Vista Avenue to Haven and Berrellesa Street to Paso Nogal Road)
- Arnold Drive (Howe Road to Glacier Drive)
- Berrellesa Street (Marina Vista Avenue to Alhambra Avenue)
- Center Avenue (Howe Road to Hidden Lakes Drive)
- Chilpancingo Parkway (Morello Boulevard to Glen Circle)
- Elderwood Drive (Alhambra Avenue to Skyview Drive)
- Escobar (Court Street to Marina Vista Avenue)
- Glacier Drive (Muir Road to Eagle Lake Court)
- Marina Vista Avenue (I-680 to Escobar)
- Morello Avenue (Pacheco Boulevard to Chilpancingo Parkway)
- Muir Road (Center Avenue to Pacheco Boulevard)
- Pacheco Boulevard (Jones Street to Morello Boulevard)

Class III bikeways:

- Alhambra Avenue (Haven to Berrellesa Street)
- Elderwood Drive (Morello Avenue to Bramblewood Lane)
- Muir Station Road (Alhambra Way to Center Avenue)
- Pacheco Boulevard (Morello Avenue to State Route 4)

Public Transportation System

CENTRAL COSTA COUNTY TRANSIT AUTHORITY

City of Martinez public transportation is provided by Central Costa County Transit Authority (CCCTA) County Connection transit service. CCCTA weekday routes 16, 18, 19, 28, and 98X serve Downtown and major arterial roadways in the City as shown in Figure 3.15-3. On weekends, CCCTA route 316 services the area in a more limited capacity. The Downtown Amtrak station is served by all Downtown stops. The nearby Bay Area Rapid Transit (BART) stations at North Concord/Martinez, Concord, Pleasant Hill, and Walnut Creek are all accessible via the provided CCCTA routes from Downtown Martinez and the Amtrak station.

BAY AREA RAPID TRANSIT

The Bay Area Rapid Transit District (BART) provides regional heavy-rail transit services within Contra Costa, Alameda, San Francisco, and San Mateo counties, with construction underway to extend service to Santa Clara County. Currently, the nearest BART station is located in North Concord/Martinez; currently, the extension to Antioch is under construction and is expected to begin service in 2018.

On weekdays, existing BART service is provided on 15-minute headways with some additional trains provided during the peak commute periods. During weekday nights (after 8:00 PM) and weekends, service is provided on 20-minute headways. Bicycles are allowed on all trains.

PARATRANSIT

Paratransit, also known as dial-a-ride or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Individuals must be registered and certified as ADA eligible before using the service. Paratransit operators are required by the ADA to service areas within three-quarters of a mile of their respective public fixed-route service.

AMTRAK

Commuter rail transportation is currently provided by Amtrak in the City of Martinez. The Martinez Amtrak Station is a major regional, interregional, and interstate rail hub located in Downtown Martinez. Amtrak passenger rail is served by the Martinez Intermodal Station (located north of Marina Vista Avenue and west of Ferry Street), at 601 Marina Vista Avenue. Regional transit connections to the station are provided through multiple CCCTA County Connection routes.

TAXI SERVICE

Taxi service in Martinez is provided by private operators that serve the greater east Contra Costa county area and beyond. Taxi service is available 24 hours a day, seven days a week by calling in a service request.

Goods Movement System

Section §10.56 of the Martinez Municipal Code establishes the City's authority to designate truck routes within the city. The Municipal Code allows truck drivers to use other city streets as well, provided those streets comprise the most direct route between the nearest truck route and the freight origin or destination, unless such movements are expressly prohibited by posted signs.

SR-4 and I-680 carry significant truck traffic and are designated as a Surface Transportation Assistance Act (STAA) terminal access route. The 1982 Surface Transportation Assistance Act set standards for large trucks, known as STAA trucks, and set minimum truck sizes that states must allow on the National Network including the Interstate System and other defined routes.

Rail Freight Transportation

Union Pacific Railroad Company (UP) operates the existing railroad tracks that parallel the waterfront area on the City's western edges (just west of Marina Vista Avenue). These tracks make up the service corridor for all passenger movement and the majority of freight traffic traveling to Sacramento, the Central Valley, and to areas along the West Coast. Burlington Northern Santa Fe

(BNSF) also operates freight trains along the corridor but on a reduced basis. Additionally, BNSF operates the existing railroad tracks that bisect the City about 2 to 1.5 miles south of the UP tracks.

Aviation System

There are no commercial airports in the City of Martinez. The nearest major airports near the City are the Oakland International Airport (37 miles), San Francisco International Airport (46 miles), Norman Y. Mineta San Jose International Airport (56 miles) and Stockton Metropolitan Airport (60 miles). The airports in Oakland, San Francisco, and San Jose provide international and domestic flights while only domestic service is provided in Stockton. Rail access to the Oakland International Airport is provided via the Amtrak Capital Corridor route.

The Buchanan Field Airport is located in unincorporated Contra Costa County community of Pacheco, situated southeast of Martinez, adjacent to the City of Concord boundary. It is a county-owned public-use airport used mainly for recreational purposes. Buchanan Field has a control tower and a high volume of general aviation traffic, with over 500 aircraft based on the field.

3.15.2 REGULATORY SETTING

The General Plan, along with a variety of regional, State, and Federal plans, legislation, and policy directives provide guidelines for the safe operation of streets and transportation facilities in Martinez. While the City of Martinez has primary responsibility for the maintenance and operation of local transportation facilities in its jurisdiction, Martinez staff works on a continual basis with responsible regional, State, and Federal agencies, including Contra Costa County, CCTA, the Metropolitan Transportation Commission (MTC), the California Department of Transportation (Caltrans), and the Federal Highway Administration, as well as others, to maintain, improve, and balance the competing transportation needs of the community and the region.

STATE

California Complete Streets Act

In 2008, AB 1358, the California Complete Streets Act of 2008, was signed into law. As of January 2011, AB 1358 requires any substantive revision of the circulation element of a city or county's general plan to identify how it will safely accommodate the circulation of all users of the roadway, including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

Caltrans

DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the state. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states:

> *The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for*

all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

DIRECTOR'S POLICY 22 (DP-22), "DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS"

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all State highways, was adopted by Caltrans in November of 2001. The policy reads:

> *The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.*
>
> *The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.*

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street;" that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods;" and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

STATE OF CALIFORNIA TRANSPORTATION CONCEPT REPORTS

Caltrans prepares a Transportation Concept Report (TCR) for each of its facilities. The TCR is a long-term planning document that each Caltrans district prepares for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period. These are indicated in the "route concept". In addition to the 20-year route concept level, the TCR includes an "ultimate concept", which is the ultimate goal for the route beyond the 20-year planning horizon. The concept for I-680 within the City includes HOV lanes southbound from Marina Vista interchange to North Main Street, and northbound from SR 242 to the Marina Vista interchange. The concept for SR 4 in Martinez includes I-680/SR-4 Interchange Phase 1: Construct two-lane direct connector from northbound I-680 to westbound SR 4 and slip ramp to Pacheco Boulevard, and Phase 2: Construct eastbound SR 4 direct connector to southbound I-680.

REGIONAL/LOCAL

Metropolitan Transportation Commission (MTC)

The current Regional Transportation Plan (RTP) produced by MTC, *Plan Bay Area*, was adopted in 2013. Plan Bay Area sets forth regional transportation policy and provides capital program planning for all regional, State, and Federally funded projects. In addition, Plan Bay Area provides strategic investment recommendations to improve regional transportation system performance over the next 25 years. Investments in regional highway, transit, local roadway, bicycle, and pedestrian projects are set forth. These projects have been identified through regional and local transportation planning processes, and in Contra Costa County include those projects listed in the CCTA's Congestion Management Program. Project recommendations are premised upon factors related to existing infrastructure maintenance, increased transportation system efficiencies, improved traffic and transit operations, and strategic expansions of the regional transportation system.

Contra Costa Transportation Authority (CCTA)

CCTA acts as the countywide planning and programming agency for transportation related issues in Contra Costa County. CCTA plays a leading role in transportation by managing the county's transportation sales tax program (Measure J), securing transportation funds, providing project oversight, and initiating long term planning activities. Every two years CCTA updates the Congestion Management Plan (CMP), which:

- sets standards for and assesses performance of the countywide circulation system;
- establishes a list of prioritized capital improvements needed to maintain performance of the circulation network over the next seven years;
- determines the process for evaluating land use decisions and their impacts to the regional roadway system;
- provides a travel demand element that promotes circulation by modes other than single-occupant vehicles; and
- establishes the countywide circulation improvements to be incorporated into MTC's Regional Transportation Improvement Program.

CCTA also maintains the regional transportation demand model, which contains a full database of existing and future land use projections, as well as current and planned circulation networks. The model is used to determine and assess the effectiveness of circulation network improvements, and to evaluate the circulation impacts associated with land use decisions such as the Martinez General Plan Update.

Measure J was passed by Contra Costa County voters in November 2004, assessing a half-cent sales tax on purchases made throughout the county to provide direct funding for local transportation projects. Measure J also includes a growth management program that assists local and regional agencies in planning for growth through 2035, facilitating cooperation among jurisdictions and creating a regional mitigation fee program.

Measure J funds are dedicated to the specific programs and projects specified in *Measure J: Contra Costa's Transportation Sales Tax Expenditure Plan*, CCTA, as amended through November 2011.

Programs include funding for bus services, paratransit, Safe Routes to School, congestion management and transportation planning programs, and the Growth Management Program. Measure J projects in the Martinez area include major infrastructure improvements such as SR 4, safety and capacity improvements on major streets, local street maintenance and improvements, One Bay Area grants, and new facilities for pedestrians and bicyclists.

The Growth Management Program (GMP) included in Measure J sets performance standards for regional corridors, as well as procedures for evaluating major land use changes or General Plan amendments. These procedures and standards are outlined in the *Growth Management Implementation Guide*, CCTA, 2010. The GMP defines Routes of Regional Significance throughout the county, and requires the preparation of sub-regional "action plans" that specify how performance on each of these routes is to be maintained and assessed. The *East County Action Plan for Routes of Regional Significance*, CCTA, 2009, defines the performance criteria to be applied on designated routes of regional significance in and surrounding Martinez.

Countywide Bicycle and Pedestrian Plan

In 2009, CCTA updated the *Countywide Bicycle and Pedestrian Plan.* While CCTA does not directly build, operate, or maintain bicycle or pedestrian facilities, it does allocate State and Federal funds to be used for these purposes. Therefore, the Plan serves as a guide for prioritizing funding throughout the county. Funding for pedestrian facilities is prioritized for pedestrian-oriented districts, routes to transit, and routes to other key activity centers.

Through the original 2003 Plan, later revised in 2009, CCTA established a Countywide Bicycle Network (CBN) which consisted of approximately "246 miles of off-street bikeways and 230 miles of on-street ones in Contra Costa, with an additional 470 miles of planned or proposed bikeways." In general the plan focuses on bikeways that serve as regional connections throughout the county and adjacent counties. Funding is prioritized for facilities identified in this plan.

The map of proposed and existing bicycle and pedestrian facilities in Martinez was updated by CCTA in 2013 and is shown in Figure 3.15-2.

City of Martinez

The Martinez General Plan Update (the proposed project) is an update to the previous City of Martinez General Plan, and is a long-range comprehensive planning document required by State law. The Circulation Element of the proposed project provides extensive goals, policies, and actions, which are relevant to the discussion of potential impacts of the proposed project, and that are discussed in the Impacts and Mitigation Measures section below.

3.15.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on transportation and circulation if it would result in:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of

transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

  - *On local roadways in Martinez*: A significant impact would occur if level of service at buildout would fall below LOS D, measured on a PM peak hour basis, which is the trigger for making roadway improvements identified in the Circulation Element of the proposed General Plan. The 1992 Circulation Element also identified LOS D as the threshold for acceptable operations.

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

TRANSPORTATION ANALYSIS METHODOLOGY

The transportation analysis for the roadway system followed the methodology described below. For other components of the transportation system, the policy framework and implementation program for the Draft General Plan were evaluated against the significance criteria.

Planned Circulation Improvements

In order to correlate existing and planned land uses within the City, traffic carrying capacity improvements to the roadway network will be needed. Arterials and new collector roads will provide access to the residential, commercial, and industrial areas, connecting those areas with the existing local and regional transportation system. Minor collector streets will include residential frontage, whereas major collector streets will not. New local roads in neighborhoods will serve those residents. The new roadways will continue to expand the existing network of roadways that characterize the City's circulation network.

Major street improvements planned for the City are listed in Table 3.15-3. Additionally, intersection improvements will be required at major intersections along new roadways and improved roadways, including but not limited to turn channelization, signalization, and/or construction of roundabouts.

TABLE 3.15-3: MAJOR CIRCULATION IMPROVEMENTS

ROADWAY	FROM	TO	ROADWAY IMPROVEMENT DESCRIPTION
Pacheco Boulevard	City Limits	Sunrise Drive	Widen Pacheco Boulevard from a two lane 25 foot wide road to a two to four lane road with medians, bike lanes, sidewalks and bus turnouts.
Alhambra Avenue	Walnut Avenue	Franklin Canyon Road	Add southbound through lane, with bike lane and sidewalk.
Alhambra Avenue	Franklin Canyon Road	Alhambra Hills Drive	Widen, where needed, Alhambra Avenue from a two lane road to a four lane road with bike lanes, bus turn-outs, traffic signals, sidewalk and sound walls.
Morello Avenue	Marie Avenue	Pacheco Boulevard	Widen Morello Avenue from a two lane road to a two lane road with medians, bike lanes, and sidewalks including the widening of the BNSF railroad trestle.

TRAFFIC SIGNAL IMPROVEMENTS	
Alhambra Avenue @ "C" Street	Alhambra Avenue @ Franklin Canyon Road
Alhambra Avenue @ Green Street	Alhambra Avenue @ Wildcroft Drive
Arnold Drive @ Fig Tree Lane	Arnold Drive @ Milano Way
Arnold Drive @ Pacheco Boulevard	Arnold Drive @ Starflower Drive
Arnold Drive @ Village Oaks Shopping Center	Berellessa Street @ Green Street
Morello Avenue @ Center Avenue	Morello Avenue @ Chilpancingo Parkway
Morello Avenue @ Elderwood Drive	Morello Avenue @ Midhill Drive
Muir Road @ Glacier Drive	Pacheco Boulevard @ Arreba Street
Pacheco Boulevard @ Bush Street	Reliez Valley Road @ Blue Ridge Drive
Reliez Valley Road @ Horizon Drive	

MULTIMODAL IMPROVEMENTS	***IMPROVEMENT DESCRIPTION***
Ferry Terminal	Construct Ferry Terminal to accommodate ferry service to and from San Francisco. Linked service may include stops at Antioch and Richmond.
Intermodal Parking & Access Improvements	Complete future phases of the Intermodal Parking facility located north of UP tracks including multimodal bridge from Berrellesa Street, Pedestrian overcrossing bridge to Amtrak Station, Realigned Ferry Street access and expanded parking areas.
Bike Improvements	Install both Class II and Class III bike lane and path improvements identified in the Countywide Bicycle Plan.

Application of CCTA Travel Demand Model

A Contra Costa County travel demand forecasting model was developed and used to forecast future traffic volumes for the Martinez Draft General Plan. The traffic model roadway network and

regional travel characteristics were calibrated to ensure that the model accurately estimated traffic volumes and could be used in the analysis process to determine the number of travel lanes for major roadway segments based on anticipated future population and employment growth.

Land Use Assumptions

Land use inputs, outside of the City of Martinez, were based on the land use contained in the Contra Costa County 2040 Model. For the incorporated City of Martinez, the land use estimates were based on population and employment growth projections for the proposed General Plan obtained from the City.

The 2040 land use forecasts were allocated to the traffic model traffic analysis zones (TAZs). The TAZs are geographic polygons used to organize land use input data for the travel demand model. The TAZs are defined by natural borders like roads, waterways, and topography and typically represent areas of homogenous travel behavior.

The land use forecasts for 2040 were input to the Contra Costa County travel demand model and the model was run to generate PM peak hour (two-way total) traffic volume forecasts. The Contra Costa County travel demand model was used to compare relative differences in VMT within Martinez for existing conditions and the 2040 General Plan.

Vehicle Miles Traveled

A common indicator used to quantify the amount of motor vehicle use in a specified area is Vehicle Miles Traveled, or VMT. VMT represents the total number of miles driven by persons traveling to and from a defined regional area, which for the purposes of this study is Martinez. Many factors affect VMT, including the average distance residents commute to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile modes, including transit, tend to generate lower VMT than auto-oriented suburban areas.

The CCTA travel demand model was utilized to estimate the changes in VMT resulting from buildout of the General Plan. VMT trips directly attributing to growth in the City of Martinez were isolated in the Contra Costa County travel demand model by performing a citywide "select zone" analysis. Implementing the "select zone" analysis, external trips (destinations and origins) outside the City that use the circulation system within the City are not counted in the City's VMT calculations. Given the substantial increase in non-residential land use planned for Contra Costa County, VMT comparisons were made for all existing and planned land uses. Table 3.15-4 displays the population and employment totals within the City of Martinez for existing and Draft General Plan conditions.

TABLE 3.15-4: POPULATION AND EMPLOYMENT COMPARISON

SCENARIO	*POPULATION*	*EMPLOYMENT*
Existing	44,166	20,785
General Plan Update	51,304	23,174

Source: Omni-Means, 2015

Table 3.15 compares existing VMT to General Plan Update conditions. As shown, total VMT with the General Plan would increase by about 0.3% percent while VMT per service population (i.e., population and employment) would increase by 1.6%.

TABLE 3.15-5: VMT COMPARISON

	EXISTING	*GENERAL PLAN BUILDOUT*
City-Generated VMT	***402,967***	***469,448***
Population	44,166	51,304
Population & Employment	64,951	74,478
VMT/Population	9.12	9.15
VMT/Population & Employment	6.20	6.30

Source: Omni-Means, 2015

ROADWAY SYSTEM ANALYSIS RESULTS

The analysis of the General Plan assumes buildout of the proposed land uses and the roadway improvements identified in Table 3.15-3. With the widening of Pacheco Boulevard, west of Arthur Road, and widening Alhambra Avenue, north of Alhambra Valley Road, the study roadway segments are projected to operate at an acceptable LOS D or better during the PM peak hour. Roadway segment level of service for existing conditions and General Plan buildout conditions on local roadways are summarized in Table 3.15-6. Roadway segment level of service for existing conditions and General Plan buildout conditions on Caltrans facilities are summarized in Table 3.15-7.

TABLE 3.15-6: PM PEAK HOUR TRAFFIC VOLUMES AND LEVEL OF SERVICE

ROADWAY SEGMENT	*EXISTING ROADWAY CLASSIFICATION*	*EXISTING CONDITIONS*		*GENERAL PLAN BUILDOUT ROADWAY CLASSIFICATION*	*GENERAL PLAN BUILDOUT CONDITIONS*	
		PM Peak Volume	LOS		PM Peak Volume	LOS
Pacheco Boulevard, west of Morello Avenue	Four-Lane Arterial	1,761	≤ C	Four-Lane Arterial	2,220	D
Alhambra Avenue, south of D Street	Four-Lane Arterial	1,703	≤ C	Four-Lane Arterial	2,440	D
Alhambra Avenue, north of Blue Ridge Drive	Four-Lane Arterial	1,575	≤ C	Four-Lane Arterial	1,830	≤ C
Marina Vista, west of Shell Avenue	Two-Lane Arterial	812	≤ C	Two-Lane Arterial	815	≤ C
Shell Avenue, north of Pacheco Boulevard	Two-Lane Arterial	326	≤ C	Two-Lane Arterial	670	≤ C
Pacheco Boulevard, west of Shell Avenue	Two-Lane Arterial	1,170	D	Two-Lane Arterial	1,485	D
Pacheco Boulevard, west of Arthur Road	**Two-Lane Arterial**	**1,764**	**E**	Four-Lane Arterial	2,395	D
Pacheco Boulevard, north of Arnold Drive	Two-Lane Arterial	704	≤ C	Two-Lane Arterial	1,310	D
Howe Road, east of Parkway Drive	Two-Lane Arterial	485	≤ C	Two-Lane Arterial	575	≤ C
Morello Avenue, north of Midhill Road	Two-Lane Arterial	873	≤ C	Two-Lane Arterial	995	D
Morello Avenue, north of Center Avenue	Two-Lane Arterial	608	≤ C	Two-Lane Arterial	760	≤ C
Morello Avenue, east of Elderwood Drive	Two-Lane Arterial	836	≤ C	Two-Lane Arterial	1,155	D
Arnold Drive, east of Old Orchard Road	Two-Lane Arterial	1,015	D	Two-Lane Arterial	1,240	D
Arnold Drive, east of Fig Tree Lane	Two-Lane Arterial	479	≤ C	Two-Lane Arterial	815	≤ C
Alhambra Avenue, north of Alhambra Valley	Two-Lane Arterial	1,666	D	Four-Lane Arterial	2,570	D
Muir Road, west of Morello Avenue	Two-Lane Arterial	592	≤ C	Two-Lane Arterial	595	≤ C

TABLE 3.15-6: PM PEAK HOUR TRAFFIC VOLUMES AND LEVEL OF SERVICE

		EXISTING CONDITIONS			***GENERAL PLAN BUILDOUT CONDITIONS***	
Center Avenue, west of Rolling Hills Way	Two-Lane Arterial	309	≤ C	Two-Lane Arterial	370	≤ C
Center Avenue, east of Glacier Drive	Two-Lane Arterial	630	≤ C	Two-Lane Arterial	715	≤ C
Berrellesa Street, south of Marina Vista	Two-Lane Arterial	259	≤ C	Two-Lane Arterial	465	≤ C
Alhambra Avenue, south of Escobar Street	Two-Lane Arterial	151	≤ C	Two-Lane Arterial	310	≤ C
Escobar, east of Alhambra Avenue	Two-Lane Arterial	188	≤ C	Two-Lane Arterial	220	≤ C
Marina Vista, east of Berrellesa Street	Two-Lane Arterial	197	≤ C	Two-Lane Arterial	490	≤ C
Court Street, south of Ward Street	Two-Lane Arterial	633	≤ C	Two-Lane Arterial	940	≤ C
Muir Road, west of Glacier Drive	Two-Lane Arterial	483	≤ C	Two-Lane Arterial	555	≤ C

Note: Bolded entries denote roadways operating above acceptable LOS thresholds

Source: Omni-Means, 2015

TABLE 3.15-7: AVERAGE DAILY TRAFFIC VOLUMES AND LEVEL OF SERVICE

ROADWAY SEGMENT	***EXISTING ROADWAY CLASSIFICATION***	***EXISTING CONDITIONS***		***GENERAL PLAN BUILDOUT ROADWAY CLASSIFICATION***	***GENERAL PLAN BUILDOUT CONDITIONS***	
		ADT Volume	LOS		Daily Volume	LOS
I-680 NB, south of Concord Ave	Eight-Lane Freeway	135,000	D	Eight-Lane Freeway	146,930	D
I-680 NB, north of Concord Ave	Eight-Lane Freeway	133,000	D	Eight-Lane Freeway	**278,965**	**F**
I-680 NB, north of Rte 4	Eight-Lane Freeway	116,000	D	Eight-Lane Freeway	**264,385**	**F**
I-680 NB, north of Pacheco Blvd	Eight-Lane Freeway	101,000	≤ C	Eight-Lane Freeway	**232,270**	**F**
Rte 4 WB, west of Alhambra Ave	Six-Lane Freeway	45,500	≤ C	Six-Lane Freeway	62,830	D
Rte 4 WB, east of Alhambra Ave	Six-Lane Freeway	61,000	≤ C	Six-Lane Freeway	**79,785**	**F**
Rte 4 WB, west of Morello Ave	Six-Lane Freeway	65,000	≤ C	Six-Lane Freeway	**83,620**	**F**
Rte 4 WB, west of I-680	Four-Lane Freeway	**88,000**	**F**	Four-Lane Freeway	**105,105**	**F**
Rte 4 WB, east of I-680	Four-Lane Freeway	**82,000**	**F**	Four-Lane Freeway	**112,850**	**F**

Source: Omni-Means, 2015

IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: The proposed General Plan could conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. (Significant and Unavoidable)

Development allowed under the General Plan Update would result in increased use of the local and regional circulation system associated with increased residential, commercial, industrial, recreational, and other uses accommodated under the proposed General Plan and Land Use Map.

LOCAL ROADWAYS

As shown in Table 3.15-6, roadway operations would be maintained at LOS D or better with implementation of the proposed General Plan Update. This is consistent with the adopted LOS standards for the City, including those in the Downtown Specific Plan. There are no adopted plans, ordinances, or policies applicable to the City or the proposed project that establish performance thresholds for pedestrian, bicycle, or transit traffic.

CALTRANS FACILITIES

As shown in Table 3.15-7, LOS on Caltrans facilities would degrade to LOS F on I-680 northbound, on the segments north of Concord Avenue, north of State Route 4, and north of Pacheco Boulevard. Operations on State Route 4 westbound, east of Alhambra Avenue and west of Morello Avenue would degrade to LOS F and existing LOS F conditions west and east of I-680 would have increased volumes.

SUMMARY

As described above, LOS on Caltrans facilities would be degraded. While full implementation of the proposed project would not result in performance of the circulation system on local roadways that exceeds applicable, adopted performance criteria, the General Plan identifies a list of circulation system improvements (Table 3.15-3) that are planned to accommodate development under the General Plan and these improvements are assumed to be implemented as described under the Transportation Analysis Methodology above. The proposed Circulation Element of the General Plan Update notes that these improvements are currently planned, but not guaranteed to occur and are dependent on funding and other considerations. Therefore, the General Plan would have a potentially significant impact on local roadways.

Applicable General Plan policies and implementation measures will ensure that subsequent development projects address their project-level impacts, pay their proportional share of roadway improvements, and/or provide necessary off-site improvements. Policy C-P-1.3 provides for an efficient citywide automobile circulation by maintaining and, where necessary, improving local and regional roadway facilities. Policy C-P-2.1 requires that an intersection LOS D or better be achieved and maintained during peak hours, where possible and feasible. Policy C-P-2.1 does recognize that

LOS D may not be achievable in some cases and that the City Council maintains discretion to require mitigation measures that will reduce impacts but may not achieve target LOS when considering new development projects. Policy C-P-2.2 provides for an efficient circulation system, taking into account existing and planned land uses, access to alternative transportation modes, and providing for more direct routes to destinations in an effort to reduce total VMT. Policy C-P-7.2 calls for designing and implementing complete streets that enable safety, comfortable, and attractive access for all users, including pedestrians, motorists, bicyclists, and transit riders of all ages and abilities. Implementation measures encourage the use of the Circulation Map and improvements table to schedule and implement roadway and intersection improvements (C-I-1.1a), development of a transportation financing program to fund the expansion of the roadway network consistent with the proposed project (C-I-2.1b), to coordinate local actions with state, regional, County, and neighboring agencies (C-I-2.1d), to request regional contributions to major street improvements that improve interregional movement (C-I-2.1e), to work with agencies, including Caltrans, CCTA, ABAG, and MTC, to plan, design, fund, and construct programmed improvements to State Highways and major regional roadways (C-I-2.1f), to use the CCTA CMP to determine the timing and degree of regional roadway facility improvements in accordance with regional plans (C-I-6.1d), to biannually develop a prioritized five-year Capital Improvement Program (CIP) that identifies needed improvements, and to review and update the City TIF associated with new development to fund and construct prioritized projects in the CIP (C-I-6.1f).

While the City will work with Caltrans to address the effects of growth on affected Caltrans facilities and while the proposed policies and actions would ensure that future development mitigates its fair-share of circulation impacts to the extent feasible, there is the potential, as identified by the proposed General Plan, that necessary improvements would not be constructed. Given that the needed improvements to address General Plan and regional growth on Caltrans facilities are conceptual improvements that do not yet have funding committed, it would be speculative to assume which improvements that are not yet fully funded would actually be funded in the future. Further, the planned development in the City only accounts for a portion of the need for future improvements on state facilities and the remaining cost of necessary improvements associated with demand from existing traffic levels and increases in regional traffic would need to be funded separately. Since the implementation of improvements necessary to ensure roadway operations meet performance standards may not occur as the General Plan identifies that the necessary improvements to the local roadway system are planned but not guaranteed due to funding and other considerations and improvements to Caltrans facilities are outside of the City's jurisdiction, the impact associated with the General Plan's potential to conflict with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system is **significant and unavoidable**.

GENERAL PLAN POLICIES AND ACTION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Circulation Element

Policies

C-P-1.1: Provide safe and well-connected neighborhood streets that balance automotive circulation with neighborhood design and bicycle and pedestrian users' safety.

C-P-1.2: Foster a strong sense of community with a "small town" character by supporting thoughtful circulation planning.

C-P-1.3: Provide efficient citywide automobile circulation by maintaining and, where necessary, improving local and regional roadway facilities.

C-P-2.1: Achieve and maintain an intersection level-of-service (LOS) D or better during peak hours where possible. Recognizing that LOS D may not be feasibly achieved or maintained upon full buildout of the Land Use Element, due to neighborhood context, multi-modal access considerations, impacts to existing uses, and/or regional factors outside control of the City, the City Council shall maintain discretion to require mitigation measures that will reduce impacts but may not achieve target LOS when considering new development projects.

C-P-2.2: Strive to reduce total vehicle-miles travelled by City residents by planning an efficient circulation system that complements existing and planned land uses, improves access to alternative transportation modes for bicycle, pedestrian, and transit users, and provides more direct routes to City and regional destinations.

C-P-2.3: Ensure compatibility and complimentary relationships between the circulation system and existing and planned land uses, promoting environmental objectives such as safe and uncongested neighborhoods, energy conservation, reduction of air and noise pollution, and access bicycle, pedestrian, and transit facilities.

C-P-3.1: Make efficient use of existing transportation facilities, and improve these facilities and build new facilities as necessary in accordance with the Circulation System Map (Figure 3.15-1).

C-P-6.1: Minimize, where possible, the number of access points along arterial roadways, including by consolidating or relocating driveways to provide for more efficient traffic movement.

C-P-6.2: Design standards should limit cul-de-sac lengths, provide a logical grid or connected system of local streets providing at least two directions of neighborhood access, and minimize through traffic on local streets, particularly traversing single family residential neighborhoods.

C-P-7.1: Plan for safe, complete, well connected neighborhood streets. Modify the existing street network where possible to enable direct physical connections within and between residential areas, shopping destinations, employment centers, and neighborhood parks/open spaces including, where appropriate, connections accessible only by pedestrians and bicycles to and/or from existing cul-de-sacs. Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.

C-P-7.2: Design and implement “Complete Streets” that enable safe, comfortable, and attractive access for all users – pedestrians, motorists, bicyclists, and transit riders of all ages and abilities – in a manner that is compatible with and complimentary to adjacent development and promotes connectivity between complimentary land uses.

C-P-9.1: Review Street Construction, development projects and utility projects to identify opportunities to implement complete streets.

C-P-9.2: Create a complete street network that provides facilities for users to travel throughout Martinez.

Implementation Measures

C-1.1a: When and where determined necessary, use the Circulation System Map (Figure 3.15-1) to identify, schedule, and implement roadway and complimentary intersection improvements to meet the projected transportation demands under buildout of the General Plan Land Use Element.

C-2.1a: Provide and maintain a citywide circulation system that is correlated with planned land uses in the City and surrounding areas in the region consistent with Government Code §65302(b).

C-2.1c: As both City and regional travel increase transportation demand, work cooperatively with regional partner agencies including Caltrans, Contra Costa Transportation Authority, Association of Bay Area Governments, Metropolitan Planning Commission, and others to plan and fund improvement projects that increase roadway capacity while maintaining or improving access to multi-modal facilities following the City's community & circulation priorities.

C-2.1d: Coordinate local actions with State, regional, County, and neighboring agencies to encourage consistency between local and regional actions.

C-I-2.1e Request regional contributions to major street improvement projects that improve not only citywide circulation but also interregional travel and goods movement.

C-I-2.1f Continue to work with Caltrans, CCTA, ABAG, MTC, County Connection, and the County to plan, design, fund and construct programmed improvements to State Highways and major regional roadways in a timely, context-sensitive manner.

C-I-2.1g Encourage Caltrans, CCTA, ABAG, MTC, and the County to refine and maintain a regional transportation demand model to assist in regional and local circulation and transportation planning, CIP funding and new development project environmental analysis.

C-I-2.1h Correlate City CIP projects with most current estimates of available outside funding from Federal, State, and regional sources. Continue to participate in the effort to develop and coordinate a regional financing mechanism for major regional transportation improvements.

C-3.1a: Build arterials, collector and local streets in accordance with adopted City standards. Improve existing facilities to conform to classification standards where possible. Exceptions to the standards may be allowed by the City Engineer where mitigation is infeasible or would impact general safety, right of way needs, visual aesthetics, air quality and noise impacts and or overall quality of life.

C-5.1f: Update the Regional Transportation Plan (RTP) to include the City of Martinez Circulation Element Update.

C-6.1a: Provide and maintain coordinated traffic control systems that move traffic within and through the City in an efficient and orderly manner. Upgrade systems where feasible as technology evolves.

C-6.1b: Perform periodic evaluations of the City's (and Caltrans) traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize flow along arterial corridors.

C-6.1c: Continue to coordinate the City's design standards for regional roadways with the standards of adjacent and overlapping agencies to provide smooth transitions for roadway users between jurisdictional boundaries.

C-6.1d: Utilize the CCTA Congestion Management Program (CMP) to determine the timing and degree of regional roadway facility improvements in accordance with regional plans.

C-I-6.1e Bi-annually develop a prioritized five-year Capital Improvement Program (CIP) that identifies improvements by facility type, project extents, right-of-way requirements, required physical improvements, and preliminary cost estimates.

C-I-6.1f Review and update the City Transportation Impact Fee (TIF) associated with new development in Martinez to fund and construct prioritized improvements projects in the CIP, having established a nexus between new development and future infrastructure needs.

C-I-.6.1g Utilize assessment and improvement districts and other supplemental private funding to correct local area deficiencies such as inadequate parking, transit, and streetscape enhancement or completion of local street or trail segments that benefit the area.

Impact 3.15-2: The proposed General Plan could conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. (Significant and Unavoidable)

Development allowed under the General Plan Update would result in increased use of the regional circulation system associated with increased residential, commercial, industrial, recreational, and other uses accommodated under the proposed General Plan and Land Use Map.

As shown in Table 3.15-7, roadway operations on regional routes of significance (Alhambra Avenue and Pacheco Boulevard) would be maintained at LOS D or better with implementation of the proposed General Plan Update. Pacheco Boulevard segments located west of Morello Avenue and north of Arnold Drive would degrade from LOS C or better to LOS D. The segments of Alhambra Boulevard located south of D Street would degrade from LOS C or better to LOS D. While LOS D would be maintained, there would be a degradation in operations as previously described which could adversely affect performance on regional routes of significance. The General Plan identifies a list of circulation system improvements (Table 3.15-3) that are planned to accommodate development under the General Plan and these improvements are assumed to be implemented as described under the Transportation Analysis Methodology above. The proposed Circulation Element of the General Plan Update notes that these improvements are currently planned, but not guaranteed to occur and are dependent on funding and other considerations.

Applicable General Plan policies and implementation measures will ensure that subsequent development projects address their project-level impacts, pay their proportional share of roadway improvements, and/or provide necessary off-site improvements. Policy C-P-1.3 provides for an efficient citywide automobile circulation by maintaining and, where necessary, improving local and regional roadway facilities. Policy C-P-2.1 requires that an intersection LOS D or better be achieved

and maintained during peak hours, where possible and feasible. Policy C-P-2.1 does recognize that LOS D may not be achievable in some cases and that the City Council maintains discretion to require mitigation measures that will reduce impacts but may not achieve target LOS when considering new development projects. Policy C-P-2.2 provides for an efficient circulation system, taking into account existing and planned land uses, access to alternative transportation modes, and providing for more direct routes to destinations in an effort to reduce total VMT. Implementation measures encourage the use of the Circulation Map and improvements table to schedule and implement roadway and intersection improvements (C-I-1.1a), development of a transportation financing program to fund the expansion of the roadway network consistent with the proposed project (C-I-2.1b), to work cooperatively with regional partner agencies to fund and plan improvement projects (C-I-2.1c), to coordinate local actions with state, regional, County, and neighboring agencies (C-I-2.1d), to request regional contributions to major street improvements that improve interregional movement (C-I-2.1e), to work with agencies, including Caltrans, CCTA, ABAG, and MTC, to plan, design, fund, and construct programmed improvements to State Highways and major regional roadways (C-I-2.1f), to use the CCTA CMP to determine the timing and degree of regional roadway facility improvements in accordance with regional plans (C-I-6.1d), and to review and update the City TIF associated with new development to fund and construct prioritized projects in the CIP (C-I-6.1f). While the proposed policies and actions would ensure that future development mitigates its fair-share of circulation impacts to the extent feasible, there is the potential, as identified by the proposed General Plan, that necessary improvements to regional routes of significance would not be constructed. Since the implementation of improvements necessary to ensure regional roadway operations meet performance standards may not occur as the General Plan identifies that the necessary improvements are planned but not guaranteed due to funding and other considerations, the impact associated with conflicts with CCTA's congestion management program for regional routes of significance is **significant and unavoidable**.

GENERAL PLAN POLICIES AND ACTION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Circulation Element

Policies

C-P-1.1: Provide safe and well-connected neighborhood streets that balance automotive circulation with neighborhood design and bicycle and pedestrian users' safety.

C-P-1.2: Foster a strong sense of community with a "small town" character by supporting thoughtful circulation planning.

C-P-1.3: Provide efficient citywide automobile circulation by maintaining and, where necessary, improving local and regional roadway facilities.

C-P-2.1: Achieve and maintain an intersection level-of-service (LOS) D or better during peak hours where possible. Recognizing that LOS D may not be feasibly achieved or maintained upon full buildout of the Land Use Element, due to neighborhood context, multi-modal access considerations, impacts to existing uses, and/or regional factors outside control of the City, the City Council shall maintain discretion to require mitigation measures that will reduce impacts but may not achieve target LOS when considering new development projects.

C-P-2.2: Strive to reduce total vehicle-miles travelled by City residents by planning an efficient circulation system that complements existing and planned land uses, improves

access to alternative transportation modes for bicycle, pedestrian, and transit users, and provides more direct routes to City and regional destinations.

C-P-2.3: Ensure compatibility and complimentary relationships between the circulation system and existing and planned land uses, promoting environmental objectives such as safe and uncongested neighborhoods, energy conservation, reduction of air and noise pollution, and access bicycle, pedestrian, and transit facilities.

C-P-3.1: Make efficient use of existing transportation facilities, and improve these facilities and build new facilities as necessary in accordance with the Circulation System Map (Figure 3.15-1).

C-P-6.1: Minimize, where possible, the number of access points along arterial roadways, including by consolidating or relocating driveways to provide for more efficient traffic movement.

C-P-6.2: Design standards should limit cul-de-sac lengths, provide a logical grid or connected system of local streets providing at least two directions of neighborhood access, and minimize through traffic on local streets, particularly traversing single family residential neighborhoods.

C-P-7.1: Plan for safe, complete, well connected neighborhood streets. Modify the existing street network where possible to enable direct physical connections within and between residential areas, shopping destinations, employment centers, and neighborhood parks/open spaces including, where appropriate, connections accessible only by pedestrians and bicycles to and/or from existing cul-de-sacs. Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.

C-P-7.2: Design and implement "Complete Streets" that enable safe, comfortable, and attractive access for all users – pedestrians, motorists, bicyclists, and transit riders of all ages and abilities – in a manner that is compatible with and complimentary to adjacent development and promotes connectivity between complimentary land uses.

C-P-9.1: Review Street Construction, development projects and utility projects to identify opportunities to implement complete streets.

C-P-9.2: Create a complete street network that provides facilities for users to travel throughout Martinez.

Implementation Measures

C-1.1a: When and where determined necessary, use the Circulation System Map (Figure 3.15-1) to identify, schedule, and implement roadway and complimentary intersection improvements to meet the projected transportation demands under buildout of the General Plan Land Use Element.

C-2.1a: Provide and maintain a citywide circulation system that is correlated with planned land uses in the City and surrounding areas in the region consistent with Government Code §65302(b).

C-2.1c: As both City and regional travel increase transportation demand, work cooperatively with regional partner agencies including Caltrans, Contra Costa Transportation

Authority, Association of Bay Area Governments, Metropolitan Planning Commission, and others to plan and fund improvement projects that increase roadway capacity while maintaining or improving access to multi-modal facilities following the City's community & circulation priorities.

C-2.1d: Coordinate local actions with State, regional, County, and neighboring agencies to encourage consistency between local and regional actions.

C-I-2.1e Request regional contributions to major street improvement projects that improve not only citywide circulation but also interregional travel and goods movement.

C-I-2.1f Continue to work with Caltrans, CCTA, ABAG, MTC, County Connection, and the County to plan, design, fund and construct programmed improvements to State Highways and major regional roadways in a timely, context-sensitive manner.

C-I-2.1g Encourage Caltrans, CCTA, ABAG, MTC, and the County to refine and maintain a regional transportation demand model to assist in regional and local circulation and transportation planning, CIP funding and new development project environmental analysis.

C-I-2.1h Correlate City CIP projects with most current estimates of available outside funding from Federal, State, and regional sources. Continue to participate in the effort to develop and coordinate a regional financing mechanism for major regional transportation improvements.

C-3.1a: Build arterials, collector and local streets in accordance with adopted City standards. Improve existing facilities to conform to classification standards where possible. Exceptions to the standards may be allowed by the City Engineer where mitigation is infeasible or would impact general safety, right of way needs, visual aesthetics, air quality and noise impacts and or overall quality of life.

C-5.1f: Update the Regional Transportation Plan (RTP) to include the City of Martinez Circulation Element Update.

C-6.1a: Provide and maintain coordinated traffic control systems that move traffic within and through the City in an efficient and orderly manner. Upgrade systems where feasible as technology evolves.

C-6.1b: Perform periodic evaluations of the City's (and Caltrans) traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize flow along arterial corridors.

C-6.1c: Continue to coordinate the City's design standards for regional roadways with the standards of adjacent and overlapping agencies to provide smooth transitions for roadway users between jurisdictional boundaries.

C-6.1d: Utilize the CCTA Congestion Management Program (CMP) to determine the timing and degree of regional roadway facility improvements in accordance with regional plans.

C-I-6.1e Bi-annually develop a prioritized five-year Capital Improvement Program (CIP) that identifies improvements by facility type, project extents, right-of-way requirements, required physical improvements, and preliminary cost estimates.

C-I-6.1f Review and update the City Transportation Impact Fee (TIF) associated with new development in Martinez to fund and construct prioritized improvements projects in

the CIP, having established a nexus between new development and future infrastructure needs.

Impact 3.15-3: The General Plan Update would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (No Impact)

The proposed General Plan Update would not have an effect on air traffic patterns. The proposed General Plan Update does not propose to change land uses in any manner which could affect operations at Buchanan Field. The General Plan does not propose new uses that would increase air traffic and does not propose any changes in location of airports or air traffic. There is **no impact**.

Impact 3.15-4: The General Plan Update would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)

The implementation of the General Plan Update would increase the amount of vehicle traffic, as well as bicycles, pedestrians, and buses, using the circulation system. The City maintains roadway standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. New and upgraded roadways needed to accommodate new development will be designed according to applicable federal, state, and local design standards.

Through the environmental review process, land use proposals that would add traffic to streets not designed to current standards are carefully evaluated. If needed, mitigations are identified and the project is conditioned to construct or provide funding for an improvement that would minimize or eliminate the hazard. Typical improvements include shoulder widening, special signage and striping, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, prohibiting certain turning movements, and other improvements.

Subsequent development, infrastructure, and planning projects would be required to comply with the General Plan, the City Code, and applicable state and local regulations. The General Plan Update establishes policies and actions that would ensure potential hazards associated with project design and compatibility of uses are addressed. Specifically, the General Plan Update includes policies and measures to provide safe and well-connected neighborhood streets that balance automotive circulation with neighborhood design and bicycle and pedestrian users' safety (C-P-1.1), to ensure compatibility and complimentary relationships to build arterials, collector and local streets in accordance with adopted City standards and to improve existing facilities to conform to classification standards where possible (C-P-2.3). Exceptions to the standards may be allowed by the City Engineer where mitigation is infeasible or would impact general safety, right of way needs, visual aesthetics, air quality and noise impacts and or overall quality of life (C-I-3.1a), and to adopt a formalized procedure for evaluating and analyzing roadways for speed and safety in order to consider the needs of all modes of transportation and adjacent land uses (C-I-5.1b). Implementation of these policies and actions would ensure that potential transportation hazards associated with project design and compatibility of uses is addressed and mitigated. Therefore, this impact is **less than significant**.

GENERAL PLAN POLICIES AND ACTION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Circulation Element

Policies

C-P-1.1 Provide safe and well-connected neighborhood streets that balance automotive circulation with neighborhood design and bicycle and pedestrian users' safety.

C-P-2.3: Ensure compatibility and complimentary relationships between the circulation system and existing and planned land uses, promoting environmental objectives such as safe and uncongested neighborhoods, energy conservation, reduction of air and noise pollution, and access bicycle, pedestrian, and transit facilities.

Implementation Measures

C-I-3.1a Build arterials, collector and local streets in accordance with adopted City standards. Improve existing facilities to conform to classification standards where possible. Exceptions to the standards may be allowed by the City Engineer where mitigation is infeasible or would impact general safety, right of way needs, visual aesthetics, air quality and noise impacts and or overall quality of life.

C-I-5.1b Adopt a formalized procedure for evaluating and analyzing roadways for speed, safety in order to consider the needs of all modes of transportation and adjacent land uses.

Impact 3.15-5: The General Plan Update would not result in inadequate emergency access. (Less than Significant)

Development under the General Plan Update would result in increased development densities and intensities, result in new roadways, and would increase the number of users on the transportation system. There will be a need to ensure that adequate emergency access provisions are made to accommodate increased population and growth.

The General Plan Update provides for improvements to increase connectivity and ensure adequate access, such as the multimodal bridge from Berrellesa Street providing connectivity for new development on the north site of the UPRR tracks. The General Plan includes implementation measure PS-I-5.c to ensure that access is provided for emergency vehicles and firefighting equipment on all new development and redevelopment projects and PS-I-9.1a requires ongoing evaluation of response time and improvements to equipment and personnel when necessary to ensure response goals are met. With implementation of the identified policies and actions, the General Plan Update would not result in inadequate emergency access. This impact is **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

CIRCULATION ELEMENT

Policies

C-P-5.1: Plan and prioritize Downtown area improvements that reduce congestion and promote non-motorized travel between nearby complimentary uses.

C-P-6.1: Minimize, where possible, the number of access points along arterial roadways, including by consolidating or relocating driveways to provide for more efficient traffic movement.

C-P-6.2: Design standards should limit cul-de-sac lengths, provide a logical grid or connected system of local streets providing at least two directions of neighborhood access, and minimize through traffic on local streets, particularly traversing single family residential neighborhoods.

C-P-7.1: Plan for safe, complete, well connected neighborhood streets. Modify the existing street network where possible to enable direct physical connections within and between residential areas, shopping destinations, employment centers, and neighborhood parks/open spaces including, where appropriate, connections accessible only by pedestrians and bicycles to and/or from existing cul-de-sacs. Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.

Implementation Measures

C-5.1c: Consider traffic circles/roundabouts or other innovative designs, if and where appropriate, as alternatives to stop signs and traffic signals when studying corridor and intersection configuration options.

C-5.1d: Where feasible, separate sidewalks from streets on arterials and collectors with landscaping. Consider tree canopies where feasible to create shade.

6.1a: Provide and maintain coordinated traffic control systems that move traffic within and through the City in an efficient and orderly manner. Upgrade systems where feasible as technology evolves.

6.1b: Perform periodic evaluations of the City's (and Caltrans) traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize flow along arterial corridors.

PUBLIC SERVICES ELEMENT

Implementation Measures

PS –I- 5.3c Firefighting Access

Continue to require access for emergency vehicles and firefighting equipment on all new development and redevelopment projects. The City shall also identify the feasibility of constructing additional emergency access improvements, such as:

- Additional vehicle pullouts at key hillside locations.
- Limiting or restricting on-street parking at key hillside locations.
- Potential for construction of new or improved emergency access routes.

PS-I-9.1a Continually evaluate response time and make improvements to equipment and personnel when necessary to ensure goals.

Impact 3.15-6: The General Plan Update would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Less than Significant)

TRANSIT

Implementation of the General Plan could lead to increases in the city's population and employment that would increase the demand for transit services offered by Western Contra Costa Transit Authority (WCCTA), as well as other local and regional agencies and services.

While there are no established standards regarding transit levels of service that have been adopted by the City or transit agencies, the General Plan includes policies to ensure that there are no significant adverse impacts to public transit facilities. Policy C-P-10.2 provides for continued cooperation with other agencies and jurisdictions, including CCCTA, to promote public transit and C-P-10.4 provides for coordination with public transit agencies to facilitate safe, efficient, and convenient pedestrian and bicycle access to transit stops. Implementation measures provide for support and expansion of transit, including working with CCCTA to support and expand transit routes to regional destinations within the City (C-10.1a) and transit routes for local and regional destinations (C-10.1b), supporting funding for transit services, including consideration of adding transit to the TIF (C-10.1c), coordination to implement regional transit solutions (C-10.1e), and supporting efforts to improve coordination and efficiency of bus service on a regional level (C-10.1g). With implementation of policies and implementation measures identified in the General Plan Update, the project would have a **less than significant** impact on transit services.

BICYCLE AND PEDESTRIAN FACILITIES

Implementation of the General Plan would improve the existing bicycle and pedestrian circulation infrastructure and require future development to provide multimodal circulation improvements. Increases in the city's population and employment that could result under implementation of the General Plan would also likely lead to increases in pedestrian and bicycle travel beyond current levels. The Countywide Bicycle and Pedestrian Master Plan identifies bicycle and pedestrian improvements to serve existing and anticipated growth in the City.

The General Plan Update implements the Bicycle and Pedestrian Master Plan through a series of policies and measures that provide for new and improved bicycle and pedestrian facilities and address the safety and performance of the bicycle and pedestrian network, as identified below. With implementation of the below policies and mitigation measures, the proposed General Plan Update would be consistent with the Bicycle and Pedestrian Master Plan and would ensure adequate performance and safety of the bicycle and pedestrian system. Therefore, the impact is **less than significant**.

GENERAL PLAN POLICIES AND ACTION MEASURES THAT MITIGATE POTENTIAL IMPACTS

Circulation Element

Policies

C-P-1.1: Provide safe and well-connected neighborhood streets that balance automotive circulation with neighborhood design and bicycle and pedestrian users' safety.

C-P-1.3: Provide a comprehensive citywide system of bicycle lanes and recreational trails that improve accessibility without the use of an automobile.

C-P-2.2: Strive to reduce total vehicle-miles travelled by City residents by planning an efficient circulation system that complements existing and planned land uses, improves access to alternative transportation modes for bicycle, pedestrian, and transit users, and provides more direct routes to City and regional destinations.

C-P-2.3: Ensure compatibility and complimentary relationships between the circulation system and existing and planned land uses, promoting environmental objectives such as safe and uncongested neighborhoods, energy conservation, reduction of air and noise pollution, and access bicycle, pedestrian, and transit facilities.

C-P-4.1: All street standards shall be reviewed and revised as determined appropriate, including optional features such as landscaped medians, traffic calming features, and parkways or street trees, and other similar design amenities when approved by the City. When reviewing new development consider alternative local street designs that meet the needs of vehicles, pedestrians and bicyclists.

C-P-5.1: Plan and prioritize Downtown area improvements that reduce congestion and promote non-motorized travel between nearby complimentary uses.

C-P-7.1: Plan for safe, complete, well connected neighborhood streets. Modify the existing street network where possible to enable direct physical connections within and between residential areas, shopping destinations, employment centers, and neighborhood parks/open spaces including, where appropriate, connections accessible only by pedestrians and bicycles to and/or from existing cul-de-sacs. Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.

C-P-7.2: Design and implement "Complete Streets" that enable safe, comfortable, and attractive access for all users – pedestrians, motorists, bicyclists, and transit riders of all ages and abilities – in a manner that is compatible with and complimentary to adjacent development and promotes connectivity between complimentary land uses. New development projects to contribute to or construct transit facilities where they would induce or increase demand on nearly arterial and collector streets, as determined through a Transportation Impact Analysis funded and completed by the project proponent.

C-P-8.1: Promote walking and bicycling for transportation, recreation, and improvement of public and environmental health.

C-P-8.2: Recognize and meet the mobility needs of pedestrians and bicyclers of all skill levels and ages, persons using wheelchairs, and those with other mobility limitations.

C-P-8.3: Develop off street pedestrian linkages, including approaches such as connections allowing pedestrians to travel through the ends of cul-de-sacs, pedestrian paths, bridges over creeks and roadways, and pedestrian circulation throughout the City.

C-P-8.4: Provide safe and direct pedestrian routes and bicycle facilities between destinations to enhance non-motorized circulation network and interface with regional systems.

C-P-9.1: Review Street Construction, development projects and utility projects to identify opportunities to implement complete streets.

C-P-9.2: Create a complete street network that provides facilities for users to travel throughout Martinez.

C-P-10.1: Promote the use of public transportation for daily trips, including to schools and workplaces, as well as other purposes.

C-P-10.2: Continue to cooperate with other partner agencies and jurisdictions to promote local and regional public transit, including CCCTA.

C-P-10.3: Collaborate with Martinez Unified School District to plan improved school bus transportation system, including parking and loading areas, maintenance and storage facilities, and bicycle and sidewalk facilities.

C-P-10.4: Coordinate with public transit agencies to facilitate safe, efficient and convenient pedestrian and bicycle access to transit stops and work with agencies to relocate stops if necessary.

C-P-10.6: Encourage transit use, by working with regional transportation providers to install bus stops, shelters, benches, turnouts, park and ride lots, transfers, and other necessary facilities on arterial and collector streets.

Implementation Measures

C-1.1b: Update the Circulation Map (3.12-3) when making improvements to the overall circulation system in order to, to support multimodal travel of all users and transportation of goods within and through the City.

C-2.1c: As both City and regional travel increase transportation demand, work cooperatively with regional partner agencies including Caltrans, Contra Costa Transportation Authority, Association of Bay Area Governments, Metropolitan Planning Commission, and others to plan and fund improvement projects that increase roadway capacity while maintaining or improving access to multi-modal facilities following the City's community & circulation priorities.

C-5.1a: Require new development to construct projects that maximize opportunities for alternative transportation modes such as bicycle and pedestrian paths as well as public transit opportunities to create easy access to and from Downtown.

C-5.1e: Improve the existing street network to minimize travel times and improve mobility for transit, bicycle, and walking trips between new projects and surrounding land uses in an effort to reduce vehicle trips.

C-7.1a: Implement land use policies designed to create a development pattern that facilitates shopping, working, socializing, and recreation within walkable distances.

C-7.1b: Encourage the development of a network of continuous walkways within new commercial, public, and industrial uses to improve employees' ability to walk safely around, to, and from their workplaces.

C-8.1a: Provide pedestrian facilities that are accessible to persons with disabilities and ensure that roadway improvement projects address accessibility by employing universal design concepts consistent with ADA requirements.

C-8.1b: Ensure that landscaping plans consider street trees to provide shade and comfort for pedestrians and bicyclists.

C-8.1c: Install clearly marked crosswalks at intersections near all commercial uses, as well as clearly marked pedestrian paths within parking areas. Mid-block crossings are discouraged. However, if conditions warrant and are approved by the City Engineer,

crosswalks and signage indicating pedestrian activity should be installed at mid-block entrances where existing commercial uses are adjacent to other high-intensity uses, such as parks and schools where necessary for safety.

C-8.1d: Facilities for bicycle travel (Class I bike/multiuse paths, Class II bike lanes, and Class III bike routes) shall be provided to complete a continuous system, consistent with the Countywide Bicycle & Pedestrian Plan presented in Figure 3.15-2. Deviations from the routing shown on the Bicycle & Pedestrian Master Plan may be permitted with approval of the City Engineer.

C-8.1e: Bike lane widths shall follow State standards. In cases where existing right of way constraints limit development of Class II facilities, Class III signage and demarcation may be permitted at the discretion of the City Engineer. Deviations from these standards may be permitted with approval of the City Engineer.

C-8.1f: Use visual cues, such as brightly-colored paint on bike lanes or a one-foot painted buffer strip, along bicycle routes to provide a visual signal to drivers to watch out for bicyclists.

C-8.1g: In order to increase awareness of bicyclists sharing the roadway with motorized vehicles; demarcate Class III bicycle facilities, where appropriate, by painting "sharrows" on streets. Because of maintenance costs associated with "sharrows", their use should be prioritized in areas of higher bicycle use frequency, areas with increased bicycle-vehicle conflict zones, or where the bikeway may be obscured by traffic, or natural or built environment.

C-8.1h: Establish a program to encourage bicycle use among City employees. Consider incentives that encourage private employers to facilitate and promote bicycle use by employees.

C-8.1i: Provide safe bicycle access to and from parking facilities at all community parks.

C-8.1j: Continue to designate a portion of the City's street construction and improvement fund for financing bikeway design and construction.

C-8.1k: Ensure that City facilities within the Countywide Bicycle and Pedestrian Plan maintain consistency with the requirements of the Streets and Highway Code in order to be eligible for further funding for improvements from the State, such as the Bicycle Transportation Account funds.

C-8.1l: Include funding for City facilities within the Countywide Bicycle & Pedestrian Plan updates and bikeway improvements consistent with the plan in the City's TIF, recognizing the multi-modal travel needs of the City.

C-9.1a: Develop a check list to identify development projects so that the plan(s) include trails and bicycle and or pedestrian paths that could be included in the network of transportation routes wherever feasible.

C-9.1b: Train City staff who reviews applications to integrate multimodal infrastructure in street design, as appropriate.

C-9.1c: Prioritize limited funds among potential complete street improvement projects taking into account safety, sidewalk and bicycle access, and access to trails.

C-10.1a: Work with CCCTA to continue to support and expand transit routes that serve regional destinations within the City like the Downtown area, medical centers, Amtrak.

C-10.1b: Work with CCCTA to continue to support and expand transit loops to serve medical centers, schools, shopping, employment and recreational destinations and regional shopping, employment, and recreational destinations

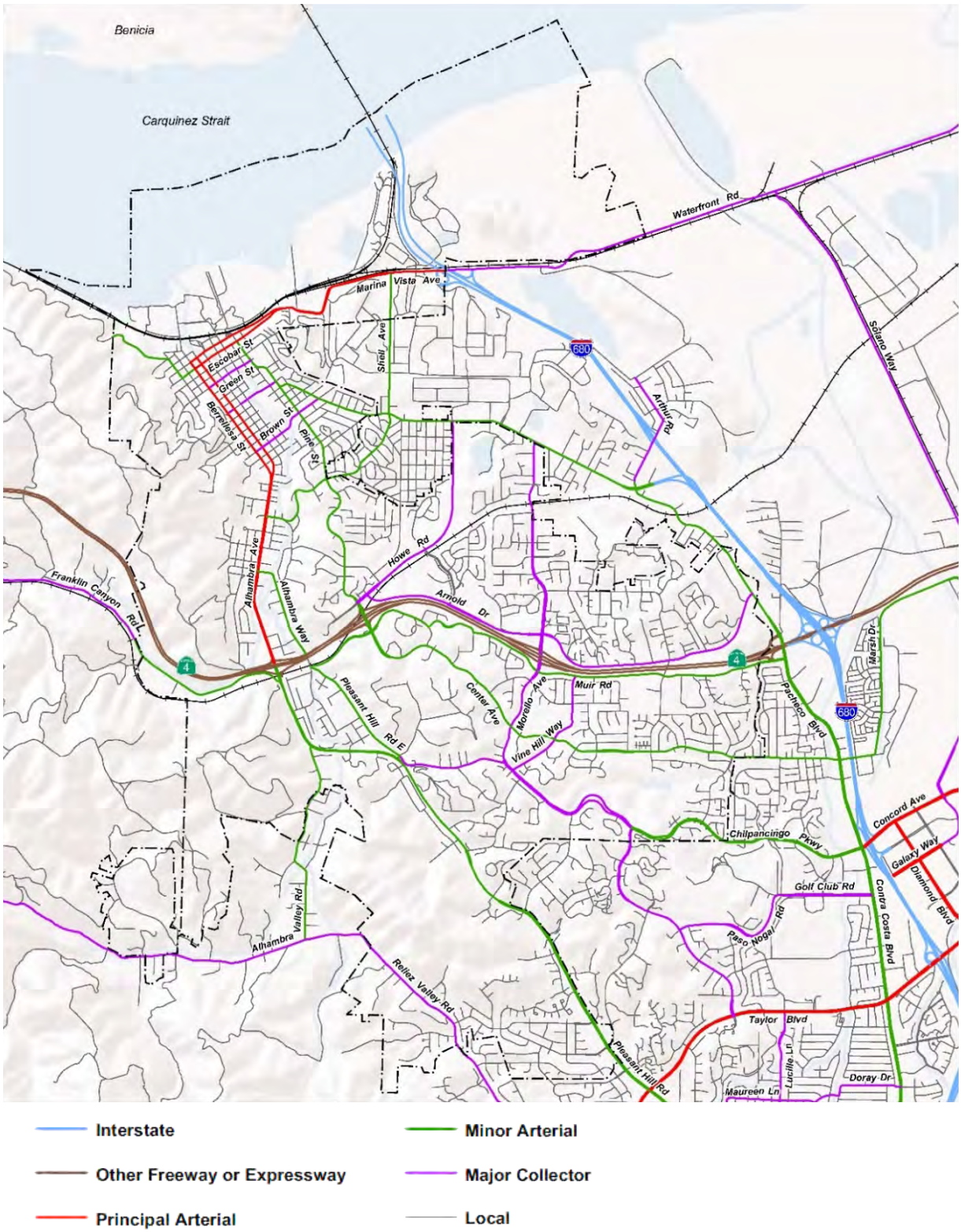
C-10.1c: Funding for transit services. Work with CCTA and MTC to continue to pursue federal and State funds to subsidize capital and operating costs associated with local transit operations. If federal funds are reduced and capital needs are not being met, transit may be added to the TIF through a Nexus Study that after a public hearing process is approved by the City Council.

C-10.1d: Encourage ridership on public transit systems through marketing and promotional efforts. Provide information to residents and employees on transit services available for local and regional trips.

C-10.1e: Coordinate with partner agencies to implement regional transit solutions as part of the SB 375 Sustainable Communities Strategy.

C-10.1f: Support existing regional transit services. Continue to support the County Connection service provided by CCCTA.

C-10.1g: Support efforts to improve the coordination and efficiency of bus service on a regional level and, if appropriate, the regionalization of transit service delivery.



Interstate
Other Freeway or Expressway
Principal Arterial
Minor Arterial
Major Collector
Local

Figure 3.15-1: Circulation System Map

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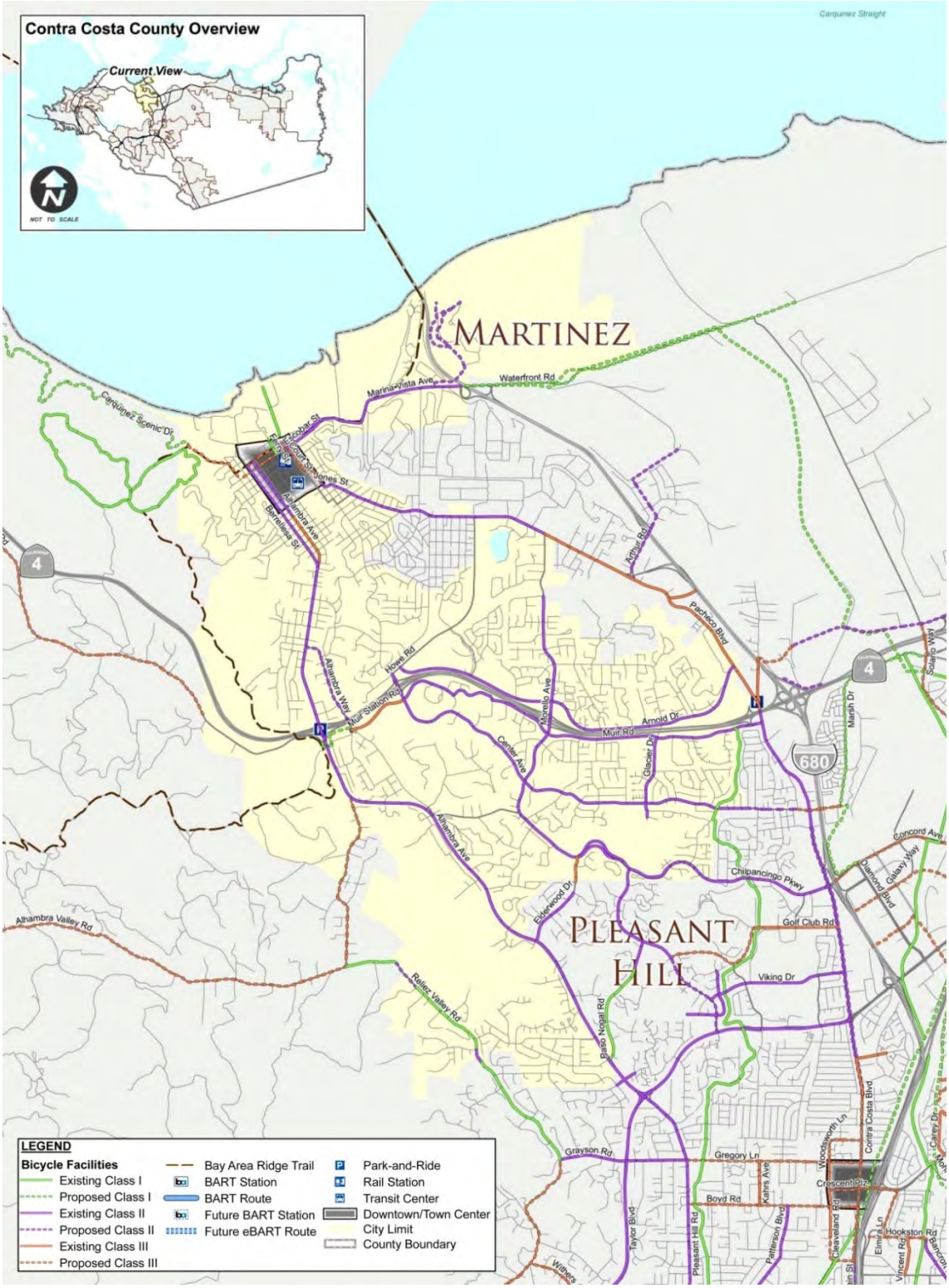

Figure 3.15-2: Martinez Bicycle and Pedestrian Plan

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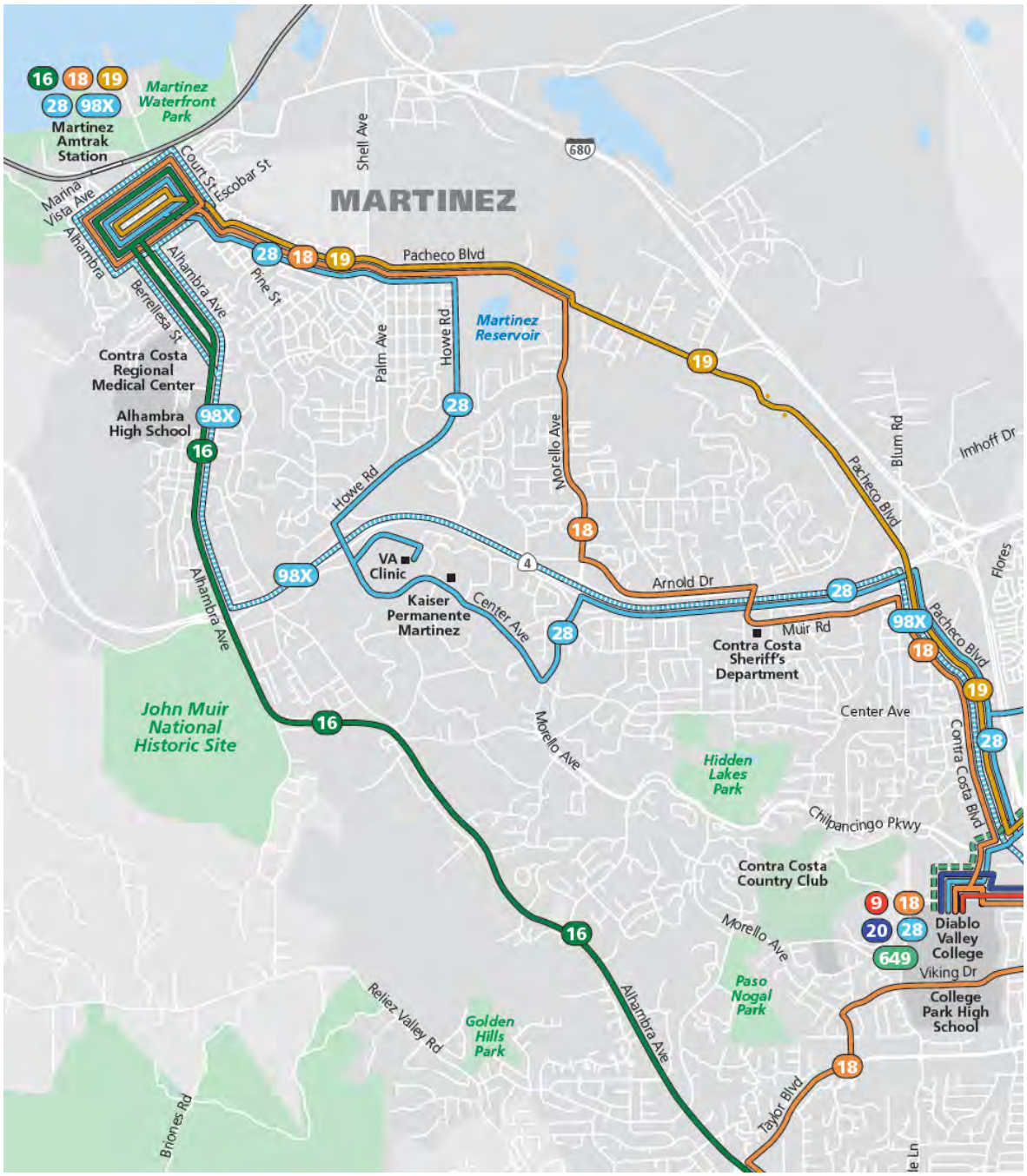

Figure 3.15-3: CCCTA Transit Services in Martinez

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Utilities are critical to providing safe drinking water, disposal and treatment of wastewater, stormwater drainage, and solid waste disposal. This section provides a background discussion of the utility systems in Martinez including water supplies, wastewater, storm drainage, and solid waste. This section is organized with an existing setting, regulatory setting, and impact analysis.

3.16.1 WATER SUPPLIES

The City of Martinez is served by the City of Martinez Water Department and the Contra Costa Water District (CCWD). Approximately 75% of the City area is within the City's water service area and is serviced by the City of Martinez Water Department. As of 2010, The City water service area includes approximately 82 percent of the City's population and also extends outside City limits along the northeast, southeast, and southwest borders of the City, including County areas and part of the City of Pleasant Hill. (City of Martinez UWMP 2010 Update, 2011). The CCWD directly serves water that is treated by the CCWD's Bollman Water Treatment Plant to portions of the eastern half of the City, the remaining 25% of the area within the City's incorporated boundary, representing approximately 18 percent of the City's population.

KEY TERMS

Acre feet (af): The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

BGS: Below ground surface.

GPD: Gallons per day.

GPM: Gallons per minute.

MG: Million gallons

MGD: Million gallons per day

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.

WATER SERVICE AREA

The City's water service area encompasses over 10,000 acres. The water service boundaries for the City's water system are not contiguous with the City limits. The water service area extends outside City limits along the northeast, southeast, and southwest borders of the City. These areas include County areas and part of the City of Pleasant Hill. Along the eastern side of the City, CCWD directly provides retail water service to a number of customers within the Martinez City limits. Land uses within the water service area boundary include residential, commercial, industrial, public agencies, and parks. There is no irrigated agriculture within the water service area. The land use is more

diverse in the northern portion of the water service area. The southerly three quarters of the service area is generally residential and park land uses.[1]

WATER SUPPLIES

Water service is provided for residential, commercial, industrial, public and irrigation customers, and for fire protection uses.

The City of Martinez has the following existing water supplies:

- Treated surface water for potable water uses

SURFACE WATER

Martinez's surface water supply is from the San Joaquin River Delta. The City of Martinez purchases untreated water from CCWD for use within the City of Martinez Water Department service area. CCWD supplies treated water to the remaining portion of the City. CCWD pumps water from four intakes in the Sacramento-San Joaquin Delta. The intakes are located at Rock Slough, on Old River, on Victoria Canal and at Mallard Slough. The backbone of the District's water conveyance system is the 48-mile Contra Costa Canal, which starts at Rock Slough and ends at the Martinez Reservoir. The CCWD obtains the water that it sends to the City of Martinez through the US Bureau of Reclamation (USBR) Central Valley Project (CVP). The untreated water is conveyed to Martinez through the Contra Costa Canal (Canal). Treated water is treated at the Bollman Water Treatment Plant and pumped through a pipeline system to CCWD's treated water system customers.

RECYCLED WATER SUPPLIES

Central Contra Costa Sanitary District (Central San) provides recycled water to its residential customers free of charge and has a recycled water hydrant truck filling program. The recycled water is available for pick-up at the Household Hazardous Waste Collection Facility in Martinez. The recycled water can be used residentially to hand-water lawns, gardens, and landscaping. The recycled water can be used to fill water hydrant trucks for use in dust control, soil compaction, landscape irrigation, and sewer flushing. The City does not currently supply any recycled water and there are not currently any recycled water projects planned. However, wastewater generated from the water service area is recycled and used outside the water service area boundaries. Recycled water may offset some of the treated water demand in the future.

WATER DISTRIBUTION AND TREATMENT SYSTEM

CCWD SERVICE AREA

Discussion of CCWD's water distribution and treatment system is based on information provided in the Contra Costa Water District Urban Water Management Plan (CCWD, 2011).

[1] http://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?blobid=5719

Untreated Water Conveyance

The primary conveyance facility for CCWD's untreated water supply is the Canal, which carries water from Rock Slough for deliveries throughout CCWD's service area. The Canal is approximately 48 miles long, with the major deliveries within the first 19 miles, which runs from Rock Slough to the Shortcut Pipeline near the Bollman Water Treatment Plant. Four pumping plants within the first 7.1 miles of the Canal lift water 124 feet to flow the remaining length of the main Canal by gravity. The Ygnacio Relift Pump Station diverts water from the main Canal into the 5-mile Ygnacio Loop in the City of Walnut Creek. The Canal has several in-line siphons, culverts, and check structures, as well as a 1/4-mile long tunnel. The Shortcut Pipeline conveys untreated water from the Canal to the Bollman Water Treatment Plant, the City of Martinez, Shell Oil Company, as well as some smaller industrial customers.

The Los Vaqueros Project diversion point at Old River south of the Highway 4 crossing operates in conjunction with the Rock Slough diversion point, associated water transmission facilities, pumping plants, and other facilities. The pumping plant is at the Old River intake and has an installed capacity of 250 cfs. In 2010, CCWD completed construction of a second pumping plant on Victoria Canal near Middle River that also has an installed capacity of 250 cfs. Both the Middle River and Old River pumping plants pump water to the 4 million gallon Transfer Reservoir. From the Transfer Reservoir water can either flow by gravity to the Canal or is pumped up to the Los Vaqueros Reservoir by the Transfer Pump Station. Water stored in the Los Vaqueros Reservoir is conveyed to the Canal by gravity. The Transfer Pump Station has an installed capacity of 200 cfs.

Untreated Water Reservoirs

CCWD's untreated water storage reservoirs are Mallard, Contra Loma, Martinez and Los Vaqueros. Mallard Reservoir provides water to Bollman Water Treatment Plant and is used as a storage facility for emergency use, flow regulation, and to provide blending of the different sources of supply. The reservoir has a usable capacity of about 2,100 acre-feet, which is currently equivalent to about two weeks of supply during maximum demand for the central County treated water service area (TWSA) customers.

Contra Loma Reservoir is used primarily as a regulating reservoir for peak demands and short-term (1 to 7 days) supplies and for emergency storage. The reservoir has an available capacity of about 1,700 acre-feet.

Martinez Reservoir, located in the City of Martinez, is at the terminus of the Canal and the Shortcut Pipeline and provides regulating storage to capture flows from Canal operations. The Martinez Reservoir has an available capacity of about 230 acre-feet.

The 160,000 acre-foot Los Vaqueros Reservoir stores higher quality Delta water for blending with the Delta supply during dry periods when chloride levels typically increase. Besides improving water quality for CCWD's customers, the reservoir stores water for emergency supply (minimum 3-month emergency supply) and for operational flexibility to protect fisheries

Water Treatment and Conveyance Facilities

The Bollman Water Treatment Plant is CCWD's primary water treatment facility providing treated water to the central County treated water service area, which includes a portion of the City of Martinez served directly by CCWD. The plant's treatment process includes coagulation, flocculation, sedimentation, filtration, ozonation, and disinfection. The current permitted capacity of the plant is 75 mgd. Water is pumped from the plant to the eight pressure zone distribution system through approximately 800 miles of pipeline ranging in diameter from 2 to 66 inches.

The Randall-Bold Water Treatment Plant and an adjacent 16.5 mgd treatment plant deliver treated water to the Cities of Brentwood and Antioch, the Golden State Water Company (Bay Point), and the TWSA. CCWD's 22-mile Multi-Purpose Pipeline delivers treated water from the Randall-Bold Water Treatment Plant to customers in central County, freeing up capacity in the Canal for use by wholesale municipal and industrial customers.

Untreated water from the Canal is also treated by non-CCWD treatment plants in the cities of Antioch, Pittsburg, and Martinez for delivery to their respective customers. The Martinez Water Treatment Plant is owned and operated by the City of Martinez.

CITY OF MARTINEZ WATER SERVICE AREA

The City's water utility operates treatment, storage, pumping, transmission, distribution and fire protection facilities which deliver water for use by customers located inside the City's water service area. Responsibility for operating the system lies with the Community Development Department, which has a Water Superintendent who manages the treatment plant, pump stations, and reservoirs. A Maintenance Superintendent is responsible for system meter reading and maintaining the water distribution system. The Public Works Director is responsible for design and construction of water projects. The City Council has responsibility for approving rates and charges for the water utility.

Since 1949, the City has purchased untreated water from CCWD and withdrawn it from the Martinez Reservoir. The Martinez Reservoir lies at the terminus of the Contra Costa Canal and CCWD's Shortcut Pipeline. It provides regulating storage to capture flows from the canal and Shortcut Pipeline operations. The Contra Costa Canal is part of the CVP developed by the USBR. CCWD operates and maintains the canal system, the untreated canal water, and wholesales water to the City and other agencies.

Water treated at the City treatment plant is withdrawn from the Martinez Reservoir through a polyvinyl chloride pipeline. This reservoir is an open, earthen reservoir and is estimated to have capacity of 79.6 mg based on a 2003 bathymetry. Some additional sedimentation has occurred since that time. The raw water pipeline is approximately 2,000 feet in length and was constructed in 1949. A pumping station is available to pump water from the reservoir to the treatment plant when reservoir water levels are not high enough to provide sufficient gravity flow rates to meet the City's needs.

The City currently has six primary pump stations supplying water to four distribution system pressure zones. Each pressure zone provides water pressure based on the overflow elevations of

the storage reservoirs in the zone, and water service pressures generally range from 40 psi to 110 psi. Zone 1 serves the lowest elevations in the City and Zone 4 serves the highest elevations. Four small hydropneumatic systems serve areas higher than their respective, adjacent pressure zone.

Reservoirs

The City currently operates eleven ground level treated water storage reservoirs, which have a total capacity of 10 MG. The clearwell storage at the water treatment plant provides an additional 0.75 mg. The reservoirs are located throughout each of the four pressure zones in the service area to serve the different elevations within the City. There are three reservoirs each in the two lowest and largest pressure zones, Zones 1 and 2. Two smaller reservoirs each in Zones 3 and 4 provide service for those areas. Zone 2A has one reservoir.

Storage is primarily used for (1) meeting diurnal fluctuations in demand, (2) providing water to meet fire demands, and (3) providing water during emergencies such as pump failure. The water level in each storage tank will rise and fall a few feet during the course of each day as demand for water changes. The daily variation during maximum day demands is about 5 to 10 percent of the total storage volume. The storage can also serve overnight demands during low demand periods, allowing the treatment plant to be shut down for maintenance. The storage also provides surge relief.

Pipelines and Valves

The City distribution system contains about 100 miles of pipeline ranging from 2-inch diameter to 18-inch diameter. Approximately 12.5 miles of pipeline are 14 to 18-inch diameter transmission mains. Most of the distribution system within the service area is adequately served by the transmission mains which provide service to the distribution network loops.

Zone valves are provided in system pipelines to separate the high and low pressure zones. In some areas, dual zone valves are provided to prevent accidental over pressurizing of the lower pressure system when a zone valve is mistakenly opened. However, most zone valves are a single valve within a pipeline.

WATER SUPPLY AND DEMAND

CCWD

CCWD's population had approximately 495,230 residents in 2010. CCWD's water use was 121,170 af in 2010, which included 39,470 af of wholesale water use, 66,460 af of retail water use, 8,740 af in system losses, and 6,500 af in contract deliveries outside the service area (CCWD, 2011).

CITY OF MARTINEZ WATER SERVICE AREA

The City provided customers with 3,837 AFY (3.43 MGD) of metered water in 2010. In 2012 this number rose to 4.4 MGD and 2020 build out average day demand is projected to be 5.9 MGD. Usage may fluctuate based on drought conditions and voluntary and mandatory rationing. The City regularly plans improvements to address its infrastructure needs. The City's current projects list includes the following water system upgrades.

TABLE 3.16-1: PROJECTED WATER SYSTEM UPGRADES

Project	Timeframe	Funding ($M)
Water Treatment Plant Seismic Upgrades	2015/16	$3.00
Water Treatment Flocculation Paddles	2015	$0.125
Annual Water Line Replacement	2015	$0.350

SOURCE: HTTP://WWW.CITYOFMARTINEZ.ORG/CIVICAX/FILEBANK/BLOBDLOAD.ASPX?BLOBID=2780 ACCESSED JULY 23, 2016.

REGULATORY SETTING – WATER SUPPLIES

STATE

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (SRF) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An “urban water supplier” is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 af of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier’s water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water

Resources must receive a copy of an adopted urban water management plan. The City of Martinez has prepared an urban water management plan that was adopted on June 1, 2011 and was submitted to the Department of Water Resources, the plan includes all information needed to meet the California Water Code, Division 6, Part 2.6 (Urban Water Management Planning).

Senate Bill (SB) 610 and Assembly Bill (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

LOCAL

City of Martinez General Plan

The adopted City of Martinez General Plan addresses water services in the Governmental Jurisdiction and Hidden Lakes Specific Area Plan sections.

City of Martinez Urban Water Management Plan 2010 Update

The purpose of the Urban Water Management Plan 2010 Update is to ensure efficient use of urban water supplies in the city of Martinez and promote conservation. The UWMP discusses not only the availability of water but also water use, reclamation, and water conservation activities. The UWMP complies with the Urban Water Management Planning Act (UWMP Act) (California Water Code [CWC] Section 10610 et seq.), the Water Conservation Act of 2009 (CWC Section 10608), and the 20x2020 Water Conservation Plan, which are being implemented by the California Department of Water Resources (DWR).

Contra Costa Water District Urban Water Management Plan (CCWD) UWMP

The CCWD UWMP 2010 Update presents information on the District's supply and demand forecasts, conservation programs, water shortage contingency planning, water transfers, and recycled water opportunities to the year 2035. The UWMP also includes a description of the plan adoption, public coordination, and planning coordination activities. The UWMP summarizes the status of the District's water demand management measures (also known as best management practices or BMPs) and includes the new requirements of the Water Conservation Bill of 2009 (SB X7-7), which was passed in 2009 and requires an evaluation of baseline per capita water use and identification of interim and 2020 per capita water use targets to achieve a 20% per capita water use reduction by 2020. Completion of a UWMP is required in order for a water supplier to be eligible for Department of Water Resources (DWR) administered state grants and loans and drought assistance. It is also a source of information for Water Supply Assessments (SB 610) and Written Verifications of Water Supply (SB 221). The CCWD UWMP meets all requirements of the California Urban Water Management Planning Act.

Central Contra Costa Sanitary District Collection System Master Plan Update (2010)

The Central Contra Costa Sanitary District Collection System Master Plan Update includes a summary of Central Contra Costa Sanitary District's system-wide water demands, the planning criteria used to determine water system demands, an analysis of the District's water system, discussion of existing and future water demand, and a summary of existing and future water system facilities within the District.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project may have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

2. Have insufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements are needed.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: General Plan implementation could result in insufficient water supplies to serve the project. (Significant and Unavoidable)

Implementation of the General Plan would result in increased population and employment growth within the Planning Area, and a corresponding increase in the demand for additional water supplies.

As described in Chapter 2.0, the General Plan is expected to accommodate up to 2,900 new residential dwelling units and up to 1,248,410 square feet of non-residential building space within the city limits and SOI at full buildout. This new growth within the city limits and SOI would increase the city's population by approximately 7,105 residents. The full development of the new non-residential uses would increase the employment Martinez by approximately 2,390 employees.

Water users within the Martinez service area include single-family residences, apartments, condominiums, commercial uses, industrial uses, business park uses, government uses, miscellaneous uses, landscape irrigation, pools, and mobile home customers.

CCWD SERVICE AREA

CCWD's population had approximately 495,230 residents in 2010 and is projected to reach approximately 635,140 in 2035. Growth of CCWD's treated water service area population is projected to increase from 192,980 in 2010 to 239,350 in 2035. CCWD's water use was 121,170 af in 2010, which included 39,470 af of wholesale water use, 66,460 af of retail water use, 8,740 af in system losses, and 6,500 af in contract deliveries outside the service area (CCWD, 2011).

Conservation has significantly lowered current water use levels and will reduce the need for future supplies. CCWD has successfully maintained an effective water conservation program since 1988, resulting in a decrease in water demand under current conditions compared to the early 1990's, despite an increase in population.

The CCWD has developed overall system-wide supply and demand projections, including both treated and untreated water, through 2035. CCWD's growth projections anticipate that the Martinez population will increase from 34,390 in 2010 to 39,740 in 2035.

Table 3.16-2 compares CCWD's projected water supply with projected demands over the next 25 years. CCWD's supply would exceed demand during normal year and single dry year conditions. During multi-year droughts, CCWD would experience a supply deficit. The deficits are not projected to exceed 15% of demand. The UWMP indicates that potential supply shortfalls will be met through a combination of short-term conservation program and short-term water purchases.

TABLE 3.16-2: PROJECTED POTABLE DEMANDS AND SUPPLIES (ACRE FEET/YEAR) - CCWD

	2015	2020	2025	2030	2035
Total Demand	177,100	191,500	203,400	215,500	223,100
Net Demand	155,600	162,800	173,100	182,200	187,100
Supplies – Normal Year	212,600	222,200	225,700	225,700	225,700
Supply Deficit	-	-	-	-	-
Supply – Single Dry Year	161,350	168,825	171,450	171,450	171,450
Supply Deficit	-	-	-	-	-
Supply – Multiple Dry Year, Third Year Supply	*143,050*	*149,675*	*151,950*	*151,950*	*151,950*
Supply Deficit	*12,550*	*13,125*	*21,150*	*27,150*	*27,950*

SOURCE: CCWD, 2011. TABLE 7-1.

CITY OF MARTINEZ WATER SERVICE AREA

In 2010, the City directly provided water to 9,881 water service accounts or 30,919 customers. Total water production within the City's water service area in 2010, the City's highest use year, was 4,221 af/year. The predominant use was potable use, with some untreated water and recycled water served for landscape irrigation. Single family water service accounts consumed over 54% of all water usage, and were 87% of all service accounts in the City in 2010.

The City has experienced a decline in water consumption over the years between 2005 and 2010. In 2005, the volume of water consumed in Martinez water service area was significantly higher than in 2010, at 5,229 af/year. The city, like most communities in California, has experienced lower water use in recent years due to drought and the downturn in the economy. Multi-family homes accounted for 10% of total water use, commercial facilities for 8% of use, industrial facilities for 4% of use, institutional and government facilities for 9% of use, and landscaping for 6% of use. 9% of the water sent to customers is considered unaccounted use, equal to the difference between meter customer sector totals and CCWD deliveries (City of Martinez UWMP, 2010, completed April 2011).

The City's 2010 Urban Water Management Plan includes a projection of annual water use at full buildout of the existing Martinez General Plan. The city's projected average annual use in 2035 is about 6,110 af/year. Since the General Plan Update will not substantially alter the City's existing buildout scenario as it relates to water usage, this projection remains applicable for the General Plan Update.

Table 3.16-2 summarizes annual projections of demands and supplies (in af) to meet City of Martinez demands through 2035, as documented in the City's 2010 Urban Water Management Plan. The table includes supplies as projected for a normal year scenario, for a single dry year scenario, and for a multiple dry year scenario, after the third year.

As shown in Table 3.16-3, water supply within the City water service area is expected to meet water demand through 2035 for normal years. However, under dry year conditions, projected supplies may not be enough to supply projected demand. Under these conditions, the Martinez

2010 Urban Water Management Plan describes strategies and contingency plans that would be required in order to provide adequate water supply to meet City demand.

TABLE 3.16-3: PROJECTED POTABLE DEMANDS AND SUPPLIES (ACRE FEET/YEAR) - CITY OF MARTINEZ WATER DISTRICT

	2015	2020	2025	2030	2035
Demand	5,034	4,569	4,628	4,758	4,888
Supplies – Normal Year					
Wholesale Purchased from	5,026	4,556	4,615	4,745	4,875
Totals (as reported in Table 4-1 in UWMP)	**5,034**	**4,569**	**4,628**	**4,758**	**4,888**
Difference between Supply and Demand	*0*	*0*	*0*	*0*	*0*
Supply – Single Dry Year	5,034	4,569	4,582	4,568	4,644
Difference between Supply and Demand	*0*	*0*	*-46*	*-190*	*-244*
Supply – Multiple Dry Year, Third Year Supply	*4,631*	*4,203*	*4,073*	*4,044*	*4,155*
Difference between Supply and Demand	*-403*	*-366*	*-555*	*-714*	*-733*

SOURCE: CITY OF MARTINEZ URBAN WATER MANAGEMENT PLAN 2010 UPDATE

FUTURE GROWTH

Build-out of the City of Martinez General Plan Update would include development within the City as well as annexation of areas to the southwest and northeast of the existing City limits. As previously described, this new growth would result in up to 2,900 new residential dwelling units and up to 1,248,410 square feet of non-residential building space. The full development of the new non-residential uses would increase the employment in Martinez by approximately 2,390 employees. Areas to the southwest of current city limits are already incorporated into the City water service area. However, undeveloped areas to the northeast that are within the City's Sphere of Influence, which are currently outside of the City's incorporated area, are not currently served by any water district or agency. Water provision to these areas would be decided upon annexation. The projected water growth associated with the General Plan Update anticipates development of these areas. Prior to annexation of these areas into a water services district, demands for water supply would need to be evaluated based on the existing system capacity, necessary infrastructure improvements to maintain acceptable levels of service, and the means to fund the improvements.

While the City's UWMP anticipates population growth that is similar to what would occur under the General Plan Update, the CCWD UWMP has anticipated lower growth rates than would be expected with implementation of the General Plan. The City's current household population is approximately 35,992 persons in 2015 and development under the General Plan would result in an increase of up to 7,105 new residents, for a total population of approximately 43,097. The City's UWMP has anticipated that the population would be 41,400 in 2035 and the CCWD UWMP has

anticipated that Martinez's population would be 39,740 in 2035. While buildout of the General Plan would likely take longer than 20 years, buildout growth would exceed growth anticipated by both the City and CCWD in 2035. Further, both CCWD and the City of Martinez UWMPs anticipate that supplies would not be adequate to meet demand in multiple dry years.

WATER SHORTAGE CONTINGENCY PLANNING

Preparations for water shortages generally include two components: (1) identification of additional supply sources in case of water shortage, and (2) management of demands from existing customers when shortages occur.

As described in the 2010 UWMP, the City receives its entire treated and untreated water supply from CCWD, who has identified and quantified planned sources of water for a normal year and will provide water supply to meet the projected City demands through 2035. When the United States Bureau of Reclamation (USBR) imposes CVP reductions in water supply to CCWD, CCWD has plans in place to purchase water from other sources to supplement the available water from USBR; however some water supply reductions will be passed along to its wholesale customers.

CCWD has several short-term supplemental supply options available during a water shortage. These options include application of a "hardship" water request to the USBR, potential water purchases from the "State Water Bank", possible arrangements with East Contra Costa Irrigation District and Bethel Byron Irrigation District, desalination at Mallard Slough, new groundwater facilities, and increased water recycling. During past shortages, the State Water Bank, increased water recycling and increased groundwater pumping were used. This increase in available water supply was then passed along to the City of Martinez and other CCWD customers.

CCWD's Water Shortage Contingency Plan addresses water management practices for drought and other supply interruption conditions. The Water Shortage Contingency Plan identifies four demand reduction stages. The first and second stages, water alert and water warning, involve voluntary customer demand reduction measures. The third and fourth stages, water emergency and water crisis, impose mandatory water management measures, including allotments and excess use charges.

The City developed its first formal Urban Water Shortage Contingency Plan in 1992 and submitted it to the California Department of Water Resources. The Plan was developed based on experience obtained during water shortages in 1977 and 1991. This plan is used to aid the City in anticipating drought conditions and to mitigate impacts including a supply shortfall, financial hardships on both the community and the City, and deterioration of customer relations.

The plan addresses a four stage reduction sequence which includes water rationing up to a 50 percent reduction. The plan includes Resolution No 47-91, "Establishing Water Conservation Measures and Reducing the Use of Water Furnished by the Martinez Water System during the Water Shortage Emergency." This resolution was first implemented in 1991 to meet the 25 percent reduction in untreated water supply from CCWD. The resolution establishes restrictions on new service connections, prohibits and enforces water waste and non-essential water use, outlines

water rationing restrictions, billing changes and penalties, and establishes exceptions and appeal procedures.

RATIONING STAGES AND REDUCTION GOALS

CCWD has implemented its Drought Emergency Plan to comply with Executive Order xx requires a 28 percent statewide reduction in water use. CCWD has implemented water waste prohibitions, pricing adjustments to increase costs for households that use more than an average of 200 gallons per day, and fines of up to $500 for violations of the water waste prohibitions.

The City has developed a four-stage rationing plan which is used during a water supply shortage. This plan involves both voluntary and mandatory rationing up to a 50 percent reduction in water use. The rationing stage implemented depends on the restriction imposed by CCWD on the City. A water crisis within the water service area could also cause the shortage conditions and implementation of any rationing stage as appropriate.

Water rationing has occurred in 1977, 1991, and 2009 in the City of Martinez in response to various shortages in water supply. These rationing conditions occurred because of reduction in untreated water supply by CCWD. Although a water shortage may occur due to water contamination or a problem with a water facility or process, this would be a relatively short-term condition. A water shortage has not occurred in the past for any other reason than to address drought conditions. During a drought imposed water supply shortage, the City imposes the same degree of water reduction on its customers that is imposed by CCWD.

Given the depth of contingency planning that the CCWD has developed for water supply shortages, in the event of drought conditions, the City would be prepared to reduce water demand to match supply conditions. These measures would ensure that adequate water supply would be available even under most severe drought scenarios.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE THE IMPACT

In addition, the proposed General Plan includes a range of policies and actions designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Policies PCU-P-7.1, 7.2, and 7.3 encourage the efficient use of water to meet demand from existing and future residents. Policies OSC-P-6.1, 6.2, 6.3, and 6.4 encourage sustainable development and operation of buildings as they pertain to conserving water.

While the proposed General Plan includes a comprehensive set of goals, policies and actions to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are potentially significant as water demand may exceed identified supplies at project buildout. The policies and actions listed below would assist in ensuring that adequate water supplies are available to serve new growth projected under the proposed General Plan, but do not fully address potential development proposals that may exceed available supply. Mitigation measure UT-1 includes policies and actions to ensure that the City updates its water supply plans to address new development and requires evaluation of new development proposals to ensure adequate water supply and infrastructure to serve future growth. Although the proposed General Plan and mitigation measure UT-1 require addressing water supply in planning for new

development and ensure that new development provides for its fair share of water supply system improvements, the potential remains for a water deficit to occur under multi-year drought conditions, as demonstrated by the CCWD and City UWMPs, and growth beyond that anticipated by the UWMPs could contribute to a further water deficit during multi-year drought conditions. This impact would remain **significant and unavoidable**.

MITIGATION MEASURES

Mitigation Measure UT-1: The following policies and implementation measures shall be added to the General Plan Update:

- *Policy: Require all development projects to mitigate their infrastructure service impacts or demonstrate that the infrastructure, public services, and utilities serving the City can accommodate the increased demand for services, and that service levels for existing users will not be degraded or impaired.*
- *Policy: Ensure there is adequate water supply and associated infrastructure to meet the needs of existing and future development.*
- *Implementation Measure: Periodically review and update the various City master plans for the provision and/or extension of public services to serve existing and future development. These plans include, but are not limited to, the Urban Water Management Plan and the Capital Improvement Program.*
- *Implementation Measure: Coordinate with CCWD to ensure that the CCWD UWMP addresses projected City growth and demand for treated and untreated water supply.*
- *Implementation Measure: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and ensure that new development contributes its fair share toward necessary on and off-site infrastructure.*
- *Implementation Measure: Routinely assess the City's ability to meet demand for potable water by periodically updating the Water Master Plan.*
- *Implementation Measure: As part of the development review process, require development projects to demonstrate that adequate water supply is available to serve the project.*

GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS THAT MITIGATE POTENTIAL IMPACTS

POLICIES

PCU-P-7.1 Continue working with CCWD, CCCSD, SD-6, and MVSD to ensure the demand can be met for existing and future residents.

PCU-P-7.2 Support the efficient use of water, encourage conservation of water by updating the water conservation ordinances in Martinez, reduce water use in public facilities by developing policies and schedules for retrofitting of existing facilities with water saving irrigation systems and upgrading plumbing as facilities are remodeled.

PCU-P-7.3 Work with property owners to increase awareness and reduce water use through public education.

PCU-I-9.1a Maintain the current fee structures that gives a reduction in fees for solar and grey water systems and evaluate the fee structure when possible to adjust those fees or amend to add incentives.

OSC-P-6.1 Reduce Energy, Water, and Resource Consumption wherever possible as they pertain to buildings and construction.

Policy OSC-P-6.2 Promote and encourage compliance with sustainable building standards.

OSC-P-6.3 Strongly encourage landscaping that promotes more efficient use of water and energy including an evaluation of xeriscaping (no/low water use landscaping plants), native plants in landscaping, drip irrigation and irrigation controls.

OSC-P-6.4 Encourage existing buildings and new construction to incorporate renewable energy and energy- and water-efficient technologies.

IMPLEMENTATION PROGRAMS

PCU-I-7.3a Reduce water consumption where possible through the use of artificial turf, drought tolerant landscaping, water conservation technology, and possible use of recycled water in parks and recreation facilities.

OSC-I-6.1.b Institute a water conservation program for all City facilities to include such features as: installation of waterless urinals and low flow toilets.

Impact 3.16-2: General Plan implementation may require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

Development and growth in the city under the proposed General Plan would result in increased demand for water supplies, including water conveyance and treatment infrastructure. The proposed General Plan includes policies and actions to ensure that water supplies are provided at acceptable levels and to ensure that development and growth does not outpace the provision of available water supplies.

As described under Impact 3.16-1, the projected 2035 water supplies would not be adequate to meet demand that would be generated by buildout of the General Plan. As such, implementation and buildout of the General Plan could not result in the need to construct or expand water supply and treatment facilities beyond what has been described and accounted for in the City's relevant water master plans, which include the 2010 UWMP and the CCWD UWMP.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The proposed General Plan includes a range of policies and actions (listed under Impact 3.16-1) along with mitigation measure UT-1 would ensure that water supplies are provided in a timely fashion, are adequately funded, that new development funds its fair share of services, and that the provision of water supplies to new projects does not adversely affect the supply and reliability for existing customers.

Future development in the Planning Area would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the City's existing water infrastructure network. The specific impacts of providing new and expanded waster distribution infrastructure cannot be determined at this time, as the General Plan does not propose any specific development projects and the source of additional water supply (e.g., groundwater, surface water, or recycled water) as well as the location and specifics of water infrastructure improvements will be determined with subsequent water plan and CIP updates as well as the planning process for future development projects. It is anticipated that any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses and development of public facilities, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the proposed General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR.

This Draft EIR addresses the potential impacts of development that may occur under the proposed General Plan, including residential, commercial, office, industrial, public facilities, and a range of other uses. Where potentially significant or significant impacts are identified, this EIR identifies mitigation measures to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels. There are no additional environmental impacts, apart from those disclosed in the relevant chapters of this EIR, which are anticipated to occur. Therefore, this impact is considered **less than significant** and no additional mitigation is necessary.

3.16.2 WASTEWATER

This section describes the City's wastewater infrastructure, wastewater flows, treatment plant permit requirements, and previous infrastructure planning. The CCCSD, MVSD, and County Sanitation District #6 (SD 6) provide wastewater collection, treatment, and disposal services for its residents and businesses. The City is primarily served by two wastewater treatment plants, (1) the CCCSD Wastewater Treatment Plant and the (2) MVSD Wastewater Treatment Plant (Contra Costa County Water and Wastewater Agencies Combined MSR, 2014). SD-6 operates a community wastewater treatment that serves the Stonehurst subdivision.

Much of the wastewater flows to the CCCSD Wastewater Treatment Plant located in Martinez through the pipes by force of gravity, to the Martinez Pumping Station located on Embarcadero Street. But there are some areas where hills prevent natural flow and pumping facilities are required to "lift" the water over these inclines. The CCCSD maintains three pumping stations near to the City ('Martinez', 'Fairview', and 'Maltby').

KEY TERMS

Effluent: Effluent is an outflowing of water from a natural body of water, or from a man-made structure. Effluent in the man-made sense is generally considered to be water pollution, such as the outflow from a sewage treatment facility or the wastewater discharge from industrial facilities. In the context of waste water treatment plants, effluent that has been treated is sometimes called secondary effluent, or treated effluent.

NPDES: Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

WWTP: Wastewater treatment plant. Treatment of wastewater may include the following processes: screening to remove large waste items; grit removal to allow sand, gravel, and sediment to settle out; primary sedimentation where sludge can settle out of the wastewater; secondary treatment to substantially degrade the biological content of the sewage; tertiary treatment to raise the quality of the effluent before it is discharged; and, discharge.

WASTEWATER TREATMENT

Two sanitary districts provide wastewater collection and treatment for Martinez. CCCSD collects and treats about two thirds of the wastewater generated within the Martinez water service area. The remainder of the wastewater from the east central portion of the water is collected and treated by MVSD. This area is roughly bounded by Pacheco Boulevard on the north, Bush and Pine Streets on the west, and Center Street on the south. Both sanitary districts also serve portions of

the CCWD treated water service area. The City currently does not have the infrastructure to supply recycled water, however the City does purchase recycled water from CCCSD to provide water for landscaping or public parks and parkway medians.

In coming years, the single most significant project will be (CCCSD) replacement of nearly 2,000 feet of pipeline along Alhambra Avenue that is, at peak usage time, reaching 130% capacity. Additionally, MVSD plans to replace several hundred miles of pipeline and retrofit infrastructure to better withstand seismic activity.

CCCSD WASTEWATER TREATMENT PLANT (ORDER # R2-2012-0016 NPDES # CA0037648)

The CCCSD Wastewater Treatment Plant is located near Martinez, on unincorporated land, at the intersection of I-680 and Highway 4. CCCSD currently serves portions of Martinez, Concord, Clayton, Pleasant Hill, Orinda, Lafayette, Walnut Creek, Moraga, Alamo, Danville, and San Ramon. CCCSD was created in 1946 to serve central Contra Costa County's rapidly growing population. During CCCSD's first decade, more than 300 miles of sewer pipelines were installed and a 4.5 MGD primary treatment plant was constructed. During the 1950s and 1960s wastewater flows increased and by 1968 the plant had capacity to treat 30 MGD. In 1973, CCCSD started construction of an advanced wastewater treatment plant to include filtration for water reclamation for industrial reuse.

However, the regulations requiring advanced wastewater treatment were eliminated while the plant was under construction, and completing the plant as originally designed became financially impractical. Instead, the current treatment facility was successfully completed as a secondary treatment plant. Effluent from the activated sludge secondary treatment process is disinfected and discharged to an outfall in Suisun Bay. The secondary treated effluent does not meet the requirements of Title 22 and additional treatment will be required before it is suitable for recycled water use. The secondary treatment facilities have a current NPDES permitted capacity of 53.8 MGD, with a current average dry weather flow of about 40 MGD. A portion of the wastewater collected at the treatment plant is treated for recycled water use in CCCSD's filtration plant. The filtration plant uses dual media gravity filtration and ultra violet and sodium hypochlorite disinfection facilities to produce Title 22 unrestricted use effluent. The filtration plant is permitted for 3.8 MGD.

The Plant and its associated Facility are permitted under Waste Discharge Requirements (WDRs) Order No. R2-2012-0016 NPDES NO. CA0037648, as adopted by the Regional Water Quality Control Board on February 8, 2012. The Order/Permit is effective through March 31, 2017 at which time the CCCSD will seek the approval of a new Order/Permit. The CCCSD Plant and Facility are currently in compliance with WDR Order No. R2-2012-0016 NPDES NO. CA0037648.

MVSD WASTEWATER TREATMENT PLANT (ORDER # R2-2010-0114 NPDES # CA0037770)

The MVSD Wastewater Treatment Plant is located near the Shell Oil Refinery on unincorporated land. The MVSD was established in 1923 to provide sewer service to unincorporated areas east of the City of Martinez, portions of which are now annexed into the City. The District currently operates a wastewater filtration system with an ultraviolet disinfection system, which was the first full-scale operation of this type in Northern California when constructed. The District's initial sewer

system fed into a large community septic tank. In 1951, the District installed primary treatment units. Secondary treatment began in 1968 with the addition of a secondary clarifier, digester, thickener, and a high rate biofilter.

The Plant and its associated Facility are permitted under Waste Discharge Requirements (WDRs) Order No. R2-2010-0114 NPDES NO. CA0037770 as adopted by the Regional Water Quality Control Board on November 10, 2010. The Order/Permit is effective through December 31, 2015 at which time the MVSD will seek the approval of a new Order/Permit. The MVSD Plant and Facility are currently in compliance with WDR Order No. R2-2010-0114 NPDES NO. CA0037770.

ALHAMBRA VALLEY/SANITATION DISTRICT 6

After annexation of a portion of the Alhambra Valley, the City has acquired Contra Costa County Sanitation District 6 (SD-6), a sanitary system that used to be operated by the County, which serves the Stonehurst community. This area is still on septic systems. The City is now an owner and operator of the sanitary system, which is maintained by the City by operating the community wastewater treatment plant, which collects effluent only and pumps to leach field within the annexed subdivision boundaries. Currently, each individual property within the area has a septic tank to collect solids and the individual property owners are responsible for maintenance and operation of their private septic tanks.

WASTEWATER FLOWS

Wastewater flows are typically evaluated for several conditions, including:

- Average Dry Weather Flow (ADWF) – This is the flow rate that is considered to be the actual wastewater flow from homes and businesses in the community (although it may include some flow resulting from groundwater entering the sewer system). It is measured during the summer, when the weather is dry and there is minimal infiltration and no inflow. This flow is dependent on the number of residents and number and type of businesses within the community. It varies throughout the day, with the peak diurnal flow typically occurring in the morning as the community residents wake up and prepare for the day.
- Infiltration and Inflow (I&I) – This is flow that enters the sewer system from rainfall and from increased levels of groundwater caused by the rainfall or by seasonal variation of groundwater levels.
- Peak Hour Wet Weather Flow (PHWWF) – This is the sum of the peak WWF and the peak I&I. The PHWWF is the peak flow rate that is expected to occur during large storm events.

RECYCLED WATER INFRASTRUCTURE

According to the Martinez UWMP 2010 Update, effluent from CCCSD's filtration plant is recycled for industrial reuse and irrigation. There is a 30 million gallon storage reservoir at CCCSD's plant for recycled water. Approximately 1,200 AFY (1.07 MGD) of recycled water is currently used for in-plant use, another 600 AFY (varies seasonally) is used to supply irrigation water to approximately 33 of CCWD's irrigation customers such as Contra Costa County Club Golf Course, Buchanan Fields

Golf Course, and Chilpancingo Park. Table 4-2 of the UWMP 2010 Update lists CCCSD's current and projected total wastewater collection, treated volume that will meet recycled water standards, and volume of secondary treated effluent that will be discharged into the Suisun Bay.

PLANNED FUTURE INFRASTRUCTURE

The CCCSD Planning Department worked with the City of Martinez, CCWD, EBMUD, and various consultants to develop a list of potential recycled water customers. Although the ultimate distribution system contains 326 of the 333 potential customers identified, only customers with large demands located near the treatment facility or main distribution lines were determined economically feasible for the initial project. These customers are included in the future projects envisioned for the CCCSD recycled water project (Urban Water Management Plan 2010 Update, published in April 2011).

In coming years, Contra Costa Sanitary Transportation District's (CCCSD) plans to replace nearly 2,000 feet of pipeline along Alhambra Avenue that is, at peak usage time, reaching 130% capacity. Additionally, Mt. View Sanitary District (MVSD) plans to replace several hundred miles of pipeline and retrofit infrastructure to better withstand seismic activity.

REGULATORY SETTING - WASTEWATER

STATE

State Water Resources Control Board/Regional Water Quality Control Board

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of state waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of Martinez falls within the jurisdiction of the San Francisco RWQCB.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The SWRCB's role has historically been one of providing overall policy direction, organizational and technical assistance, and a communications link to the state legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally

elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

LOCAL

City of Martinez General Plan

The adopted City of Martinez General Plan addresses wastewater in the Safety Element and Governmental Jurisdiction section.

Central Contra Costa Sanitary District Collection System Master Plan Update (2010)

The Central Contra Costa Sanitary District Collection System Master Plan Update includes a summary of Central Contra Costa Sanitary District's system-wide water demands, the planning criteria used to determine water system demands, an analysis of the District's water system, and a summary of existing and future water system facilities within the District.

UWMP Update 2010 Update (2011)

The purpose of the Urban Water Management Plan 2010 Update is meant to ensure efficient use of urban water supplies in the city of Martinez and promote conservation. The UWMP discusses not only the availability of water, but also water use, reclamation, and water conservation activities. The UWMP complies with the Urban Water Management Planning Act (UWMP Act) (California Water Code [CWC] Section 10610 et seq.), the Water Conservation Act of 2009 (CWC Section 10608), and the 20x2020 Water Conservation Plan, which are being implemented by the California Department of Water Resources (DWR).

Contra Costa County Water and Wastewater Agencies Combined Municipal Services Review and Sphere of Influence Study (2014)

The *Combined Municipal Service Review and Sphere of Influence Study* focuses on the 29 agencies (eight cities, 20 special districts and one private water company) that provide water and/or wastewater services within Contra Costa County (County). California state law authorizes Local Agency Formation Commissions (LAFCOs) within each county to establish boundaries and spheres of influence (SOIs) for cities and special districts under their purview and to authorize the provision of services within the approved service areas. This document was approved in May, 2014.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-3: General Plan implementation would not exceed wastewater treatment capacity or the requirements of the RWQCB. (Less than Significant)

As Martinez continues to develop in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. Both the CCCSD Wastewater Treatment Plant and the MVSD Wastewater Treatment Plant serve the City of Martinez. While the CCCSD is the larger of the two plants and serves many jurisdictions throughout Contra Costa County, the MVSD Plant serves only the City of Martinez and some adjacent unincorporated areas. The CCCSD Collection System Master Plan Update addresses the majority of the City's wastewater needs, requiring that the CCCSD continue to implement phased improvements to the wastewater treatment plant when triggered by growth.

The proposed General Plan includes provisions to ensure that new development cannot be approved until it can be demonstrated that adequate capacity is available to serve it. As described above, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. Since the land uses within the existing General Plan buildout scenario would not be substantially different from the land uses within the General Plan Update buildout scenario, the General Plan Update is not expected to allow an increase above planned wastewater treatment capacity.

The permitted average dry weather flow rate at the CCCSD Wastewater Treatment Plant is 53.8 MGD, which is based on the design treatment capacity of the Facility treatment system. Average Day Demand at the CCCSD Plant is 5.2 MGD, matching total supply. The Plant has a total filtration capacity of 14.7 MGD, which is sufficient to meet maximum day demand of 9.6 MGD. In addition, the CCCSD Collection System Master Plan Update describes a series of recommended capacity improvement projects and a Recommended Capital Improvement Plan to ensure that CCCSD wastewater treatment capacity remains sufficient to accommodate future demand.

The permitted average dry weather flow rate at the MVSD Wastewater Treatment Plant is 3.2 MGD, and its peak wet weather design capacity is 10.94 MGD. Total demand is 1.8 MGD. MVSD is not anticipating any growth and expects their average daily flow will remain around 2,020 AFY (1.8 MGD) through 2035 (UWMP 2010 Update, 2011). Therefore, the MVSD Plant is expected to have adequate supply to meet projected demand.

Both the CCCSD and MVSD have adequate demand available to serve growth under the General Plan Update. Based on the average per capita wastewater generation rates in the CCCSD Master Plan Update, the General Plan Update would result in approximately 0.52 MGD as shown in Table 3.16-4.

TABLE 3.16-4: PROJECTED WASTEWATER GENERATION

	General Plan New Units	General Plan New Square Feet	Base Wastewater Flow (gpd/unit)	Total Wastewater Generated (gpd)
Single Family Units	1,743	-	195/unit	339,885
Multifamily Units	1,058	-	105/unit	111,090
Commercial	-	993,216	0.1/SF	99,322
Office	-	95,816	0.1/SF	9,582
Industrial		159,378	0.1/SF	15,938
TOTAL				**575,816**

Source: City of Martinez, 2014; CCCSD, 2010

Given that projected wastewater generation volumes associated with General Plan buildout would not be expected to exceed future demand, and that the proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable wastewater collection and treatment system, impacts associated with wastewater treatment and compliance with waste discharge requirements are **less than significant.** The policies and actions listed below would further assist in ensuring that adequate wastewater treatment and conveyance infrastructure is available to serve new growth projected under the proposed General Plan.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

POLICIES

Policy OSC-P-9.1: Enforce Federal State and local mandate regarding water quality such as the National Pollutant Discharge Elimination System(NPDES).

PCU-P-7.1: Continue working with CCWD, CCCSD, SD-6, and MVSD to ensure the demand can be met for existing and future residents.

ACTIONS

Action OSC-I-9.1j: Promote reclamation and reuse of wastewater for irrigation and to recharge aquifers.

Impact 3.16-4: General Plan implementation may require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. General Plan implementation is not anticipated to result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to

serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)

Development under the proposed General Plan would result in increased wastewater flows. Over time, this would result in the need for additional or expanded wastewater treatment facilities and conveyance infrastructure, as described above.

The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site, some facilities off-site on appropriately designated land, and may also involve improvements to existing facilities and disturbance of existing rights-of-way. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose development nor does it designate specific sites for new or expanded public facilities.

Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. New conveyance infrastructure, such as pipes, will be needed to convey wastewater from new development to the existing treatment stations and lift stations may also be needed. As described under Impact 3.16-3, new wastewater treatment facilities are not anticipated to be needed; however, expansion of the CCCSD Wastewater Treatment Plan is anticipated to occur as described in the CCCSD Collection System Master Plan Update. New conveyance infrastructure would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. Impacts associated with construction activities may include air quality, drainage, and noise, and impacts associated with operation including traffic, noise, air quality, hazards, and land stability. These impacts would generally occur as described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. Other impacts that may occur include short-term direct visual impacts associated with construction activities; potential direct impacts on a variety of biological resources, including wetlands and riparian resources; loss of trees and other sensitive habitats; and loss or disturbance of special status plant and animal species. Additionally, air quality emissions of particulate matter, greenhouse gases, oxides of nitrogen, and reactive organic gases may be generated. Where potentially significant or significant impacts are identified, this Draft EIR identifies mitigation measures in the relevant chapter to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Therefore, this is a **less than significant** impact.

3.16.3 STORMWATER DRAINAGE

The information in this section focuses on the potential for the General Plan to result in the demand for new or expanded stormwater drainage facilities. Section 3.8 (Hydrology and Water Quality) includes an expanded analysis of water quality, flooding, and other stormwater related issues.

CREEKS AND FLOOD CONTROL FACILITIES

The Alhambra Creek Watershed covers approximately 16.5 square miles (43 km^2) in north central Contra Costa County and encompasses a portion of the City. The combined branches flow through Briones Valley, valleys containing open space, wildlife habitat, residential and commercial areas, through downtown Martinez and then discharge into the Carquinez Straits through a tidal wetland at the Martinez Regional Shoreline. The City owns and operates most of the smaller storm drainage systems within the city.

REGULATORY SETTING- STORMWATER DRAINAGE

FEDERAL

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2003-0005-DWQ) for small Municipal Separate Storm Sewer Systems (MS4s) covered under the CWA to efficiently regulate numerous storm water discharges under a single permit. The San Francisco RWQCB has issued a large municipality permit to jurisdictions in the San Francisco Bay region, including Martinez as part of the Contra Costa Permittees, (WDR Order R2-2009-0074, NPDES Permit No. CAS612008, 10/14/2009). Permittees must meet the requirements in Provision D of the General Permit, which require the development and implementation of a Storm Water Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

1. Public Education and Outreach on Storm Water Impacts;
2. Public Involvement/Participation;
3. Illicit Discharge Detection and Elimination;

4. Construction Site Storm Water Runoff Control;
5. Post-Construction Storm Water Management in New Development; and
6. Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and therefore must be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

STATE

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the Regional Water Quality Control Boards (RWQCBs) power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and

other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Water Quality Control Plan for the San Francisco Bay Region

The Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

LOCAL

City of Martinez General Plan

The adopted City of Martinez General Plan addresses drainage facilities in the Community Facilities Element.

Contra Costa Clean Water Program

To comply with the Federal Clean Water Act, Contra Costa County, its 19 incorporated cities, and the Contra Costa County Flood Control & Water Conservation District have joined together to form the Contra Costa Clean Water Program (CCCWP). The CCCWP strives to eliminate stormwater pollution through public education, inspection and enforcement activities, and industrial outreach. The Contra Costa Clean Water Program is dedicated to maintaining a healthy environment in Contra Costa's creeks, rivers, the Delta, and the Bay.

San Francisco Bay Region Municipal Regional Stormwater NPDES Permit Order R2-2009-0074 NPDES Permit No. CAS612008, October 14, 2009.

In response to the Federal Clean Water Act, the Contra Costa Clean Water Program regulates waste dischargers under a NPDES Permit administered by the San Francisco Regional Water Quality Control Board (Region 2). Specifically, the municipalities are regulated with regard to their jurisdiction over and/or maintenance responsibility for municipal storm drain systems and watercourses that they own or operate. The NPDES Permit is concerned primarily with regulating trash, pollutants of concern, and excessive hydrologic runoff which can carry sediment and cause flooding.

Contra Costa Clean Water Program Stormwater C.3 Guidebook

The 6th Edition of the Contra Costa Clean Water Program Stormwater C.3 Guidebook (2012) helps to ensure that applicable projects comply with the C.3 requirements in the California Regional Water Quality Control Boards' Municipal Regional Permit. The Guidebook provides detailed information about how to prepare a Stormwater Control Plan. In addition, there are two Guidebook Addendums, "Contra Costa Clean Water Program Technical Criteria for Non-LID Facilities" and "Preparing a Stormwater Control Plan for a Small Land Development Project".

Start at the Source: Design Guidance Manual for Stormwater Quality Protection

This document is intended for use in the planning and design phases of residential, commercial, institutional, and industrial development and redevelopment. It recognizes that one of the best opportunities to reduce the generation of urban runoff or "nonpoint source pollution" from development is through planning and design. This document provides Best Management Practices including principles and techniques for basic siting and design considerations, construction phase strategies, and post construction property management practices.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-5: Implementation of the General Plan may result in new or expanded stormwater drainage facilities (Less than Significant)

Development under the proposed General Plan would result in increased areas of impervious surfaces throughout the Planning Area, resulting in the need for additional or expanded stormwater drainage, conveyance, and retention infrastructure.

The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site, some facilities off-site on appropriately designated land, and may also involve improvements to existing facilities and disturbance of existing rights-of-way. The specific impacts of providing new and expanded drainage facilities cannot be determined at this time, as the General Plan does not propose development nor does it designate specific sites for new or expanded public facilities.

Stormwater drainage and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. Impacts associated with construction activities may include air quality, drainage, and noise, and impacts associated with operation including traffic, noise, air quality, hazards, and land stability. These impacts would generally occur as described in the relevant chapters (Chapters 3.1 through 3.16, and 4.0) of this Draft EIR. Other impacts that may occur include short-term direct visual impacts associated with construction activities; potential direct impacts on a variety of biological resources, including wetlands and riparian resources; loss of trees and other sensitive habitats; and loss or disturbance of special status plant and animal species. Additionally, air quality emissions of particulate matter, greenhouse gases, oxides of nitrogen, and reactive organic gases may be generated. Where potentially significant or significant impacts are identified, this Draft EIR identifies mitigation measures in the relevant chapter to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The proposed General Plan includes policies and actions designed to ensure adequate drainage infrastructure is available to serve development, to minimize the potential adverse effects of stormwater conveyance, and to ensure that development does not move forward until adequate drainage capacity exists. Policy OSC-P-9.1 requires that mandates regarding water quality, such as the NPDES permit, be enforced. This policy and the associated implementation programs would require review of future projects to ensure adequate measures are in place to protect water quality and also address management of hazardous materials, buffer establishment between development and water resources, and promotion of design that incorporates stormwater detention and retention in development projects.

The policies and actions listed below would ensure that there is adequate stormwater drainage and flood control infrastructure to serve future development under the General Plan, and would ensure that future drainage and flood control infrastructure projects do not result in adverse environmental impacts. This is a **less than significant** impact.

GENERAL PLAN POLICIES AND PROGRAMS THAT MITIGATE POTENTIAL IMPACTS

POLICIES

OSC-P-9.1: Protect and improve the quality of water in all of Martinez's watersheds, creeks, and water bodies.

OSC-P-9.1: Enforce Federal State and local mandate regarding water quality such as the National Pollutant Discharge Elimination System (NPDES).

IMPLEMENTATION PROGRAMS

OSC-I-9.1a: Review all projects in watershed to limit drainage and preserve quality of water insuring proper mitigation measures as part of development.

OSC-I-9.1b: Manage storage of hazardous materials, especially underground tanks that may leak into existing waterways.

OSC-I-9.1c: Consider the establishment of buffers between development and water resources to prevent contamination of the water from urban pollutants.

OSC-I-9.1d: Enforce development guidelines that protect areas that are susceptible to erosion or other factors that would pose significant impacts to local waterways.

OSC-I-9.1e: Encourage the use of pest resistant and drought tolerant landscape design and features, and promote the use of design that incorporates stormwater detention and retention in development projects.

OSC-I-9.1f: Support the use of green roof to reduce runoff flow rates and volume, absorb and filter pollutants, supply green habitat and nesting areas and help lower urban heat island effect.

OSC-I-9.1h: When appropriate utilize the Bay Friendly Landscape Guidelines in order to reduce water consumption.

OSC-I-9.1i: Support the efforts of Contra Costa County Sanitation District with respect to their reclaimed water management project.

OSC-I-9.1j: Promote reclamation and reuse of wastewater for irrigation and to recharge aquifers.

3.16.4 SOLID WASTE

The City is responsible for all solid waste collection within the city limits. Republic Services (formerly Allied Waste Services) has a franchise agreement with the City for the collection and disposal of solid waste and recyclable items. It operates both the Contra Costa Transfer Station and the Keller Canyon Landfill, which is projected to be capped in 2030. The company offers weekly curb-side commercial and residential pick-up services as well as a drop off service for a limited variety of household hazardous waste materials.

As a joint effort, CCCSD and Mt. View Sanitary District operate the Household Hazardous Waste Collection Facility. All hazardous waste materials can be dropped off for free by residents or for a small fee by businesses.

KEY TERMS

Class I landfill: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.

Class II landfill: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.

Class III landfill: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.

Transfer station: A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.

Waste Management Plan: A Waste Management Plan (WMP) is a completed WMP form, approved by the City for the purpose of compliance with Chapter 8.19.050 of the Martinez Municipal Code, submitted by the applicant for any covered project. Prior to project start, the WMP shall identify the types of construction and demolition (C&D) debris materials that will be generated for disposal and recycling. A completed WMP contains actual weight or volume of the material disposed recycled receipts.

WASTE COLLECTION SERVICES

The City and Republic Services (formerly known as Allied Waste Services) have franchise agreements establishing garbage and recycling collection services for residents and businesses in Martinez that were amended on May 4, 2011, as part of a 10-year extension. The agreements were amended again on May 16, 2012, as part of the City's implementation of the State of California's mandatory commercial recycling regulations.

Republic Services implemented a "single stream" (also known as "Brown cart") curbside recycling program for single and multi-family residences in 2005. Single stream recycling has replaced the old 3 bin recycling system that Martinez residents used for many years. Single stream recycling allows residents to commingle ("mix") all household recyclables (metal, glass, plastic containers, and mixed paper, cardboard) in the brown 64 gallon recycling cart for collection.

Residents can also recycle lawn clippings and other yard waste with their 96 gallon green recycling carts. Pick up is every other week on the same day as garbage collection. Acceptable Yard Waste includes grass clippings, brush, weeds and leaves, hay and straw, prunings and tree trimmings. Materials that are not accepted for collection include plastic bags, rocks, concrete, sod and dirt, stumps, palm fronds and pet waste.

In addition, the City's franchise agreements with Republic Services, entitle single family residential customers to a total of nine free pickups per year. These special pickups will include four recycling/yard waste collections (which include household battery, cellular telephone, and compact fluorescent light bulb recycling); two refuse collections with up to 3 cubic yards allowable (an increase from 2 cubic yards); two "bulky item" collections (such as mattresses, furniture, or appliances); and one pre-scheduled "spring cleanup" day.

WASTE DISPOSAL FACILITIES

Central Contra Costa Transfer Station

Republic Services operates a solid waste transfer station. The station is located at 951 Waterbird Way, in the eastern portion of the City of Martinez. All the MSW collected by the City goes to this transfer station. The MSW delivered to the transfer station is checked for potentially hazardous waste material, and transferred onto larger trucks for ultimate disposal at a sanitary landfill or processed elsewhere. The City of Martinez disposes and/or processes MSW (garbage, recycling, and green waste) at the Keller Canyon County Landfill, operated by Republic Services.

Keller Canyon County Landfill

The Keller Canyon Landfill opened on May 7, 1992 as a Class II Landfill operating under permit number 07-AA-0032. The facility accepts municipal solid waste, non-liquid industrial waste, contaminated soils, ash, grit, and sludges. Keller Canyon Landfill is closed to the public.

Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The Keller Canyon landfill currently handles 2,500 tons of waste per day, although the permit allows up to 3,500 tons of waste per day to be managed at the facility. According to the CalRecycle Solid Waste Facility Permit (07-AA-0032), as of December 2009, the remaining capacity of the landfill's disposal area is estimated at approximately 63 million cubic yards, and the estimated date for ceasing operations for the landfill is 2030.

The composite liner system at the landfill was designed to meet or exceed all State and Federal regulations. The containment system consists of two feet of compacted clay with a maximum permeability of 1x10 -7 cm/sec covered by an 80-mil-thick high-density polyethylene (HDPE) textured geomembrane. Beneath the liner system is a one-foot thick layer of sand that intercepts groundwater and conveys it to an adjacent wetlands mitigation area. The leachate collection and removal system is located directly on top of the composite liner. This system consists of a 12 oz/yd 2-cushion geotextile, a 1-foot-thick granular layer and a 6 oz/yd 2 filter geotextile. HDPE pipes are located within the granular layer to increase the system's efficiency.

The groundwater monitoring system at the landfill consists of 24 wells, 19 piezometers and 4 springs which are sampled or measured monthly, quarterly, or annually. Leachate is sampled from the leachate holding tanks after 50,000 gallons have accumulated. The site has a sedimentation basin that is monitored during and after each rainfall or quarterly, whichever is greater. Radiation is monitored by radiation detectors located at the scalehouse. Landfill gas monitoring probes are located at 29 positions around the perimeter of the site.

HAZARDOUS WASTE DISPOSAL

Central Contra Costa Sanitary District and Mountain View Sanitary District partnered in 1997 to open a Household Hazardous Waste (HHW) facility in Martinez. The facility is located at 4797 Imhoff Place in Martinez, and is open Monday through Saturday from 9 a.m. to 4 p.m. for residents (9 a.m. to 3:30 p.m. for the reuse room); and Monday through Saturday by appointment only for small businesses.

The City of Martinez also offers a free disposal service for pharmaceuticals, at the Martinez Police Department, located at 525 Henrietta St., across from City Hall.

SOLID WASTE GENERATION RATES AND VOLUMES

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Martinez between 2009 and 2013 are shown in Table 3.16-5 below.

TABLE 3.16-5: SOLID WASTE GENERATION RATES

Year	Waste Generation Rate (lbs/person/day)	Total Disposal Tonnage (tons/year)
2009	5.6	37,120
2010	4.5	29, 419
2011	4.2	27,534
2012	4.2	27,590
2013	4.9	32,918

SOURCE: HTTP://WWW.CALRECYCLE.CA.GOV/LGCENTRAL/REPORTS/JURISDICTION/REVIEWREPORTS.ASPX ACCESSED JULY 2015.

As shown in the table above, both the per capita waste generation rate and the total annual disposal tonnage in Martinez has been trending downward from 2009 through 2011, with an upward trend beginning in 2012 and continuing through 2013.

In accordance with AB 939, which required municipalities to aggressively pursue MSW source reduction and recycling, the City continues to meet and exceed all AB 939 goals. The various solid waste management actions adopted by the City include, but are not limited to, recycling and yard waste programs for residents and businesses, public education and public outreach, school recycling, City office recycling programs, and purchasing policies. As of 2006, the City achieved a waste diversion rate of approximately 52%.

REGULATORY SETTING – SOLID WASTE

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA, enacted in 1976, is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

STATE

California Integrated Waste Management Act (AB 939 and SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory State waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” The term “integrated waste management” refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

LOCAL

Martinez Municipal Code, Chapter 8.16: Garbage

Chapter 8.16 of the Martinez Municipal Code contains specific requirements related to:

- Pre-collection and storage of solid waste;
- Waste ownership and responsibilities;
- Waste collection;
- Waste disposal; and
- Solid waste handling.

Martinez Municipal Code, Chapter 8.19: Construction and Demolition Debris Recycling

Chapter 8.19 of the Martinez Municipal Code contains specific requirements related to the applicable thresholds for projects covered by the ordinance and the requirements for the preparation, submission, and implementation of project-specific waste management plans (WMPs). Every residential and non-residential construction and demolition project; every residential renovation project; additions to non-residential buildings or structures of at least 1,000 square feet; and alterations to non-residential buildings or structures with an estimated construction cost of at least $200,000.00 within the City of Martinez, shall be considered a covered project and shall comply with the diversion requirement and with the other requirements of Section 8.19.040.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it would:

1. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or.
2. Not comply with Federal, State, and local statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-6: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid was disposal needs and will comply with Federal, State, and local statutes and regulations related to solid waste. (Less than Significant)

Development under the proposed General Plan may increase the population within the Planning Area by approximately 7,105 persons. As described above, the City of Martinez has achieved a disposal rate of 4.9 PPD per resident in 2013. Assuming these disposal rates remain constant

throughout the life of the General Plan, the new growth under General Plan buildout would result in an increase of approximately 34,815 pounds per day of solid waste (7,105 x 4.9), which equals 17.4 tons per day or 6,354 tons of solid waste per year.

The city's annual increase in solid waste generation is well within the permitted capacity of the Solid Waste Transfer Station and does not exceed the daily permitted capacity of the Keller Canyon landfill. The Keller Canyon landfill currently handles 2,500 tons of waste per day, although the permit allows up to 3,500 tons of waste per day to be managed at the facility. According to the CalRecycle Solid Waste Facility Permit (07-AA-0032), as of December 2009, the remaining capacity of the landfill's disposal area is estimated at approximately 63 million cubic yards, and the estimated date for ceasing operations for the landfill is 2030.

While there is adequate permitted landfill capacity to accommodate future growth, the proposed General Plan includes policies and actions to further reduce the project's impact on solid waste services, as identified below. The General Plan would not exceed the permitted capacity of the landfill serving the city, and the General Plan complies with regulations related to solid waste. Therefore, impacts to solid waste are **less than significant** and no mitigation is necessary.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

POLICIES

PCU-P-8.1 *The City shall continue to promote recycling programs throughout Martinez.*

PCU-P-8.2 *Require new construction sites, as required by State Law, to provide for salvage, reuse or recycling of construction and demolition materials.*

PCU-P-8.3 *Require public buildings to incorporate on-site storage facilities for recyclable materials.*

PCU-P-8.4 *Encourage and increase opportunities for safe disposal of electronic waste and hazardous materials by residents and businesses in Martinez.*

PCU-P-8.5 *Continue efforts to reduce litter throughout the city.*

ACTIONS

PCU-I-8.5a *Continue to participate in Green building practices and promote recycling, and reuse through outreach and educational programming whenever possible.*

PCU-I-8.5b *Consider an outreach program to educate residents and businesses about the use of more durable local and low impact goods.*

PCU-I-8.5c *Consider the inclusion of a Municipal purchasing policy to reduce the purchase of disposable items, such as bottled water whenever practical.*

PCU-I-8.5d *Continue providing community workshops on backyard composting and home management of organics programs as funding permits.*